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FEDERAL ENVIRONMENTAL ASSESSMENT BOARD

Sitting in the Flying Dutchman
Motor Inn, Bowmanville, Ontario,

VOLUME 1

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Sitting at the Flying Dutchman
Motor Inn, Bowmanville, Ontario,
on Tuesday, September 27th, 1977

Volume 1

BEFORE:

John Klenavic	-	Chairman
Reg Lang	-	Member
Ms. Ellan Derow	-	Member
Murray Duncan	-	Member
David Scott	-	Member
Kim Shikaze	-	Member
Peter M. Bird	-	Member
Clement W. Cheng	-	Member

Michael Warder	-	Acting Secretary
Brian Timmermans	-	Information Officer

APPEARANCES:

C.T. Grant	Counsel for Eldorado Nuclear Limited
S.E. Frost	Representative for Eldorado Nuclear Limited
R. Dakers	Representative for Eldorado Nuclear Limited

G. Colbourne — Representative for Eldorado Nuclear Limited

I N D E X

Representative for
Elderado Nuclear Limited

I N D E X

INTERVENORS:

Bowmanville, Ontario,
September 27, 1977.

--- Upon commencing at 7:00 p.m.

THE CHAIRMAN: Good evening ladies and gentlemen. My name is John Klenavic, and I am chairman of the Environmental Assessment Panel that has been established to consider the Port Granby project proposed by Eldorado Nuclear. I would like, first of all, to explain to you the purpose of these Hearings, and what it is hoped that we will accomplish by them. The Hearings that we are going to have over the next few weeks are part of the environmental assessment and review process which was established by the Federal Cabinet a few years ago. This process was agreed upon at Cabinet level, with the objective of insuring that environmental effects are taken into account early in the planning of new federal projects, programs and activities, and that an environmental assessment is carried out on all projects which may have an adverse effect on the environment. The results of such assessments are to be used in the planning and decision-making before the project is allowed to proceed. By the Cabinet directive which established this process, all federal organizations are bound to participate in it, with the exception of regulatory agencies and

proprietary Crown corporations, such as Eldorado Nuclear, which are invited rather than directed to participate in the process. Eldorado has accepted this invitation and submitted their proposed refineries in Ontario and Saskatchewan to the environmental assessment and review process.

Now, the decision that established this process also directed the Minister of the Environment to develop the procedures to accomplish the objectives that I have mentioned. Now, these Hearings are part of these procedures. I would like to emphasize that they are not a part of a legally enshrined process, and they do not have the force of law. There is nothing obligatory about the attendance of anyone here this evening, there is no right of subpoena, no intention of taking evidence under oath.

Now, the panel which you see here, which I will introduce you to in a few minutes, is charged with the process of preparing a report to the Minister of the Environment. This report is to contain recommendations concerning the potential and environmental impact of the project and methods to mitigate the adverse effects that may result from it. The type of recommendations that we are likely to make are, generally speaking, of three types. We may consider

that the project proposed in the environmental impact statement, will have no adverse environmental impact, and may therefore proceed as planned, or we may consider that there may be an adverse environmental impact on any or all parts of the proposal, and we may recommend measures to mitigate against this impact. Finally, we may conclude that the overall adverse environmental impact of the project is such that the project should not be allowed to proceed.

Now, within that scope are the three general options which I might characterize as go, go with modifications, or no go. There is a fair amount of scope. Part of the process in formulating our report is the input at hearings such as these.

Now, as I said, we are here to prepare a report to the minister. As I have also mentioned, our report is not directly binding on anyone. The report, which is normally made public, is submitted to the minister. If he accepts the recommendations, the report is forwarded to the minister of the initiating department, in this case, the Minister of Energy Mines and Resources. If both ministers accept it, one then proceeds with implementation of the recommendations. When there is a disagreement between ministers, then the course of action-- the matter would probably be referred

to Cabinet for resolution. I say "probably" because we have not had that stage in our previous panels. In terms of the overall environmental assessment and review process, I would like to point out that this panel is one of nineteen that are currently active across the country. A few examples of these I would like to cite because I think it's important to realize that these types of hearings are going on in many parts of Canada, or will be over the next few months. This is a continuing process concerning federal projects which may have adverse environmental impact. Some of the panels that are now active include the Bay of Fundy Tidal power proposals, the Eastern Arctic offshore drilling a proposed polar gas pipeline from the Arctic Islands to Northern Ontario and a proposed additional runway at Vancouver International Airport. Three panel reports have been completed and are available from our office. These are the Pointe Lepreau Nuclear Generating Station in New Brunswick, the Wreck Cove Hydro Electric development at Cape Breton Island, and the interim stage of the Alaska Highway Gas Pipeline. Copies of our register of panel projects are also available for those who may be interested. It is a little booklet like this.

Now, I would like to come back to

this panel, and explain to you what these Hearings are about and where we go from here. In order to prepare our report, we obviously want to get an indication of public concerns and make recommendations on them. We have found from experience in our other panels that it seems to work best to conduct these hearings in at least two, possibly three, phases. The first phase, which we will act this week and next, has three main purposes: to clarify points that are not understood with reference to the project; to identify possible deficiencies in the environmental impact statement to permit the panel to make decisions on which deficiencies require rectification by the proponent; and to identify concerns that the public may have about this project. Bearing in mind these three purposes, clarification of points, identification of deficiencies, and identification of concerns, this will lead the panel at the conclusion of this phase of the hearings to determine deficiencies in the environmental impact statement. In conjunction, the panel will also identify specific issues which will be scheduled for specific days of the phase two hearings, which will be held after the deficiencies are corrected. If there are major deficiencies in the EIS, the Environmental Impact Statement, that may affect the issues ther a third

phase of the hearings may be necessary at some later date.

Our second phase, then, of the earings is directed more to specific issues on specific topics. This process allows those people that are interested in a specific issue, and technical experts that may be involved, to present and discuss that specific subject, and on subsequent days of the hearings, of course, we would schedule different issues. We hope that there are certain advantages in this, in that the public can turn out and participate in those items that are directly of interest to them, without having to spend a lengthy time at hearings, listening to subjects which may not be of direct interest. I might also mention that we have asked the technical agencies within the federal and provincial governments to review the EIS, and to provide these reviews to the panel, and to make them available to the public. These reviews will be provided during the course of phase one of the hearing, and will be available for examination. I should add that these reviews have been conducted by technical experts, and do not necessarily represent policy or political views from the departments which they represent.

Now, our hearing this evening will

begin with an introduction by the proponent, Eldorado Nuclear. Following this, we will proceed to those who indicated that they wish to speak. In view of the fact that we have so far some forty-six speakers on our list, I would hope that the intervenors could limit their presentation to approximately fifteen minutes. There is, of course, no objection if anyone wishes to speak less. After the intervenors have spoken, we intend to allow approximately the same length of time for any questions, which I would like to emphasize, should be of a clarifying nature, rather than getting into debate and discussion, which is the purpose of our phase two hearing.

Also, with the phase two hearing, once the issues and concerns are clearly understood, all parties involved have the opportunity to get their facts together and be prepared to discuss them. As I mentioned, during the question period I would hope that you would direct your questions to clarifying what has been said, rather than indicating your own concerns. I might add that the panel itself may wish to ask questions at any time.

I would like to come to a few administrative points in connection with the fact that following the introduction by Eldorado, we will hear

from the first intervenors. For these, and subsequent intervenors, we have a table down at the front right that they can use when they are acting as intervenors. If time permits this evening, I would also like to open the floor to any people who have not formally registered with us, but would like to express any concerns on any subject. I imagine this will have to be kept brief, but those who would like to speak, please register with Mr. Timmermans.

Also, our proceedings this evening are being recorded and transcripts will be available. In view of this, I would like to ask all speakers to make sure that they use the microphone and that they identify themselves before they speak. We have a register of those who wish to speak, and it is flexible in terms of what happens before they get on the list, and also from the point of view of addressing the schedule to suit individual commitments. Our panel secretary, Michael Warder, or the public information officer, Brian Timmermans, should be contacted if anyone wishes to make any changes.

Our times are from 7:00 to 10:00 o'clock this evening, and from one thirty to five and seven to ten tomorrow and Thursday, and the same schedule again next week in Newcastle.

Now, I would like to introduce to you the members of the panel and the staff who are here to help us. In introducing them, I would like to point out that the panel members have been selected on the basis of their expertise related to this project. I would like you to remember that they are part of a panel that prepares a report to the Minister of the Environment. Their views may well differ with the official position of the agency from which they came. Some of these agencies will also be present and making reports during these hearings. The final point you may wish to keep in mind is that we have accepted the fact that any panel member is free to make a minority report if he or she so wishes.

We have a press release available with Mr. Brian Timmermans, which contains the biographies of the panel. Since I have spoken almost as long as the intervenors are supposed to speak, I think for the sake of brevity, I would quickly introduce the members of our panel. On my right is Ellan Derow; beside her is Clement Cheng; beside him is Peter Bird; and at the far end of the table is Reg Lang. Starting from the far end, on my left, at the far end of the table is Kim Shikaze; beside him is Murray Duncan; and to his right is David Scott; and directly beside me is our panel secretary,

Michael Warder.

During the course of the day, and when we are not involved directly in hearings, we have a room in this hotel, one zero seven, where Michael Warder and the rest of the staff that I mentioned are generally located, if you are trying to find them.

A further administrative point, before we get into the presentation from Eldorado, is that the transcripts, as I mentioned, will be available after the close of these hearings. Those who wish a complete transcript, or a single day's transcript, should write to our office in Ottawa, and we can provide you with the address at any time. We have also requested that you refrain from smoking while in this room, and I think it's becoming obvious why. Finally, as I mentioned, room 107 in this hotel is available as our office.

We have additional members to assist us. At the table on your right, we have two advisors, Eric Miller and Gerry Grisak, who are here to provide advice to the panel if we get into technical matters. Beside them is our secretary, Pat Donovan, and Brian Timmermans, our public information officer.

I think now we are ready for the presentation from Eldorado.

MR. PAUL: Mr. Chairman, may I have

the floor on a point of order?

My name is Roger Paul. I am a law student in Veldhuis Q.C., who was retained just last Thursday by SEAP, in connection with these hearings and all subsequent matters.

SEAP is a voluntary incorporated organization. It has approximately two hundred and fifty individuals who all reside within three miles of this proposed site. Therefore, beyond any question, their involvement in these proceedings is of vital interest to you and your panel members. I would submit that the hearings will be meaningless without their significant contribution to what is going to happen this week and next week. Unfortunately, Mr. Chairman, due to circumstances beyond their control, they have been placed in a position where they are in no way equipped to deal with this presentation.

The purpose of these hearings is to consider this very formidable brief of eleven hundred pages, filled with very, very technical matters. So far as I am concerned, and I think so far as they are concerned, at this point in time, it may as well be in Swahili for all the sense they can make of it.

Now, it was prepared by Eldorado over a period, I understand, of approximately two years,

at a cost of a million dollars, prepared with the assistance of their experts. You have your experts. SEAP has no experts, Mr. Chairman.

They have applied to the Secretary of State for a grant to enable them to obtain funds so that they might retain appropriate experts to analyze this very, very considerable brief for them, so they can understand what it says-- what the environmental impact is going to be in terms they can understand, so they can come here and contribute to this process. As of right now, they cannot contribute to this process because the Secretary of State, for reasons which we do not know of, has not seen fit to reply to their application for a grant.

Now, we are due to understand informally that there will be funds forthcoming. But, the application was made on July the 7th, some two and a half months ago, and there has been no formal response. Now, it may well be that they will receive funds, and it may well be that they will be in a position to retain experts to go through this thing with them. But as of this very moment, Mr. Chairman, they have nothing. They are all lay people who live in this area. They have no expertise in this field. They do not understand what is being submitted here. Consequently, they cannot

contribute to these proceedings in any meaningful manner at this point in time.

Therefore, I most strenuously request that you see your way clear to adjourn these proceedings pending them being given an opportunity to get the representation they need in order to present their case fairly and completely. That is my request, Mr. Chairman.

THE CHAIRMAN: Thank you, Mr. Paul. As I mentioned in my opening remarks, we have some forty-six people who have indicated they would like to speak here. I feel they really should be given a chance to do so. I also indicated there is a second phase of the hearings, which is the technical section of the hearings in detail. I see no need to adjourn at this time.

MR. PAUL: Mr. Chairman, I gather from your comments that you are concerned about two things. You are concerned about, one, the inconvenience that may be caused by reconvening these Hearings. I would respectfully submit to you that any inconvenience should be subordinated to the spirit and intent of the Hearings. The spirit and intent of these Hearings is that you hear from-- that you hear from the people who are going to be affected by what is being proposed here.

How can you hear from these people if they do not understand what is being proposed, and the implications of what is being proposed? I do not tend to downplay the significance of this phase one stage, as I think you are suggesting, because as I understand from your opening comments, the whole purpose of this phase is to identify major concerns, data deficiencies. Yet, we wish to place before you our major concerns and our conception of what are data deficiencies, so that when you approach the agenda and makeup of phase two of these Hearings that our considerations are taken into consideration. We are in no position to put them before you. I repeat, Mr. Chairman, I feel strongly that this panel should be adjourned. That is all I am asking for, that everybody comes back again when we are in a position to be of assistance to you. As I understand it, it's the whole purpose of these Hearings, that we can be of assistance to you. This is a public forum.

THE CHAIRMAN: Thank you, Mr. Paul. As I say, we have a number of speakers scheduled. We will be having a second phase of these Hearings. I think if you participate in these Hearings you will find them very useful in terms of the technical reviews to be presented by others. I would like to proceed with the hearing.

MR. PAUL: May I make one last request to you, Mr. Chairman, in view of your lack of interest in adjourning these proceedings? I am wondering, bearing in mind there is a good possibility that these people will receive significant funding that will enable them to go and get the kind of advice and assistance they need, can I suggest to you that the phase one part of the Hearings might perhaps be continued, or held in advance, or a continuation be held in advance so that they might come back before the phase two segment starts again so that you will have the benefit of their views and their concerns, before you get into the phase two hearings? I think it's a perfectly reasonable request and we will get a range of objections, instead of inconveniencing forty-six other intervenors that are attending here now to speak.

THE CHAIRMAN: Mr. Paul, we have roughly two weeks, on and off, of hearings. I think we can discuss how adequately we have covered concerns after we have heard from the people who have indicated they would like to speak to us.

MR. PAUL: If you will forgive me, I am only concerned with SEAP, who I represent at this time. I really wish to get their points of view across. I feel that it is a matter of a few

weeks and that point of view will be there before you, and that you will have the benefit of it. I stress the word benefit because that's the whole point of this. You yourself and members of the panel are denying the benefit of their views by taking this approach.

THE CHAIRMAN: Mr. Paul, I am sure we are not just talking about a few weeks if you wanted to discuss it further. As I said, I would like to proceed with the introduction by Eldorado. I think you have made your point. Thank you very much for making it.

MR. PAUL: Thank you, Mr. Chairman.

THE CHAIRMAN: Mr. Grant?

MR. GRANT: My name is Carl Grant. I am a lawyer for Eldorado, and I will be representing them throughout the proceedings. I would like to just make a few brief remarks concerning our understanding of the procedures so that they can be understood by the panel and by the audience, and a few comments as to how we do certain detailed aspects of the proceedings.

As you mentioned, quite correctly, there are approximately forty-six people who have indicated that they have an interest in providing submissions, or making representations to the panel. It is a goodly number of people. Therefore, in considering that number of people, we have come to the conclusion, Eldorado,

that it would be more convenient from our point of view, and we hope more understandable to you and the audience, if we not deal with questions on an ad hoc basis posed by each individual questioner. We prefer, and I suggest for your consideration, that these questions will be dealt with at a convenient time, possibly at the end of the Thursday session of this week, possibly at the end of Thursday of next week, so that we are not dealing with the same question forty-six times. It is more than just a matter of convenience. It is a practical problem. I am sure some of the questions will be of a substantially technical nature, and we do not want to have all of our technical experts here throughout the whole of the proceedings.

The second aspect, Mr. Chairman, which I would like to bring to your attention really is twofold. First of all, there has been some comment concerning the alternate sites which have been considered by Eldorado. So that nobody may be misled, I would like to advise you and the audience that we do not propose to deal with our examination of those alternate sites in any greater detail than we have dealt with in the environmental impact statement which has been filed. Our reason for doing that is quite straightforward. Our application of this panel is to

have it consider a specific proposal that Eldorado desires to construct in Port Granby a specific refinery. Our application is not to you, members of the panel, to consider a proposal to construct the refinery in any other site.

Our second matter, Mr. Chairman, is that because of the interest which has been generated, and perhaps supports the real value of this kind of project, it has come to our attention as recently as today--

THE CHAIRMAN: Excuse me, Mr. Grant I understand the microphone is not picking you up. Would you like to sit?

MR. GRANT:

Our second concern is that as recently as today we have received a copy of a technical review done by the Ministry of the Environment-- the federal Ministry of the Environment. There are copies of which I see on the back table there. We have also received from a number of interested parties some comments on what we conceive to be perhaps the most sensitive area in this overall application. It is an area which the SEAP group has expressed a great deal of interest in, an area which Mr. Veldhuis, the Chairman of the SEAP group, has expressed considerable interest, and

that is the overall area of disposal of waste or residue from the refining process. We would suggest following what we consider to be a very useful procedure suggested by the panel that we accept now that the question of the disposal of the residue from the refinery be admitted initially at this stage to be an issue. The consideration of matters relating to the disposal of the residue is of a highly technical nature. We would like to provide those who are interested in that subject with the fullest opportunity, maximum amount of time, to consider in detail our proposal with respect to that. Therefore, we would suggest for your consideration that that matter be identified at this early stage as an issue. For that reason, sir, we do not propose to deal during the first phase of the Hearing in any detail with the recommendations concerning-- or the proposals concerning the waste disposal area. However, we are keenly interested in hearing from those, what, forty-five persons who are interested in making presentations-- their comments concerning our proposal with respect to waste disposal, so that we can consider those adequately and carefully. It is not Eldorado's interest to cause any harmful effect on the environment to that waste disposal area.

Now, finally, we would like to

present to you and to the audience a very brief description of the proposal, accompanied by some slide presentations. The description initially will be introduced by Ron Dakers, who is the Vice-President of Eldorado Nuclear. Ron will speak to you about the general Eldorado organization, the kinds of objectives that it has, its desires with respect to the refining of uranium of this property. Gordon Colbourne, the General Manager of refining operations of Eldorado, would explain to you in very summary manner what we propose to do-- what they propose to do at Port Granby, and to discuss with you in a brief way the refining process.

In order to waste no further time, I would like to call upon Ron Dakers, and he will be followed immediately by Gordon Colbourne.

MR. WELMS: Mr. Chairman, my name is John Welms. I am here representing the Town of Newcastle. I have with me Mr. Harry Poch, who will also be representing the town in these hearings. We may be making a presentation closer to the end of these hearings.- We don't yet know, Mr. Chairman. I would like to respond very briefly to the remarks made by my friend Mr. Grant. Before I do so, might I ask, Mr. Chairman, will there be an opportunity in a more formal manner for counsel who represent various parties

here at this Hearing to engage in a dialogue with the panel, with other Counsel, rather than having to, in a sense, interject themselves into the proceedings on a shouted point of order from time to time?

THE CHAIRMAN: Mr. Welms, your point of order was slightly out of my point of order. There will not be an opportunity for Counsel to engage in discussion. From my point of view this panel is not a legal process, and we are not directly concerned with the subtleties of legal points, from our point of view. As I mentioned to you, and I stated a number of times in my opening remarks, we are here to prepare a report to the Ministry of the Environment.

The second point I would like to make in reference to Mr. Grant's remarks -- the points he made about the proposals to deal with alternate sites and so on -- while that may be the point of view of Eldorado, I would like to make sure that you are aware that it is not necessarily the view of the panel. The panel members may still wish to question on that further.

MR. GRANT: I understand.

MR. WELMS: Thank you, Mr. Chairman. We will do our best. I can certainly say on behalf of myself, and I am sure other counsel, we will do our

best to avoid having this hearing bogged down in legal technicalities. On the other hand, Mr. Chairman, I believe procedures are important, and are very relevant to the ability of individuals to make their concerns felt to the panel. With regard to your second point, that is exactly the concern that I wanted to raise. Mr. Grant's second and third points are closely interrelated. It seems to me it is going to be very difficult to discuss the adequacy of this site for waste disposal purposes without having an evaluation of the characteristics of other sites from that particular point of view. That is all I have for now, Mr. Chairman.

THE CHAIRMAN: Thank you. Perhaps we can proceed with the introduction by Eldorado. Mr. Dakers?

MR. DAKERS: Mr. Chairman, members of the panel, and the audience, I would like to briefly indicate what Eldorado is, and also some of the background information in our decision to propose the site at Port Granby for a new uranium refinery.

Eldorado is a Crown corporation, totally owned by the Government of Canada, whose principal business is uranium exploration, mining and

milling of uranium ores.

Our second main business is uranium refining.

THE CHAIRMAN: You are not close enough to the microphone.

MR. DAKERS: Well, quickly if I may just recap. Eldorado is a federal Crown corporation. Our principal businesses are uranium exploration, uranium mining and milling of uranium ores.

The second principal business is uranium refining, principally of ceramic uranium dioxide fuel for Candu type reactors-- the Canadian type reactors, and of uranium hexafluoride for export, which is further processed for use in nuclear power reactors in the U.S., Europe, Japan and other countries.

At Port Hope we also produce specialty nuclear fuels and depleted uranium products.

Eldorado currently employs approximately eleven hundred people, principally in the mine mill facility at uranium sites located in Northern Saskatchewan, and at our refinery at Port Hope. The corporate office exploration, research and development divisions are located in Ottawa. The western division of our mining division and exploration

divisions are located in Edmonton, Alberta. Currently our exploration division is involved in programs in aid of the ten provinces, also the Northwest and Yukon Territories. Eldorado operates the only uranium refinery in Canada. Eldorado functions as a commercial enterprise in the private sector, is profitable, pays income tax, and is financially self-reliant. There are projects such as Port Granby that would be funded through our internal sources, or other commercial sources. The company seeks business opportunities in uranium and nuclear fuels primarily, and undertakes projects which will return and accept low rate on the moneys invested. The company management is responsible through a board of directors-- appointed board of directors to the shareholder, the Government of Canada, and reports through the Minister of Energy Mines and Resources.

Early in 1975, when we decided to review the uranium refining capacity in Canada, Eldorado formed an internal task force which continued through most of 1975, and commenced-- or the decision made that we would expand uranium refining capacity in Canada.

In this study, many factors were considered. Among these were uranium resources in

Canada, and the related world resources. This first slide, which is a nuclear energy agency, International Atomic Energy Agency estimate, gives the world reasonably assured estimated resources of uranium. It totals from 3.49 million tons-- that's metric tons of uranium. Canada has approximately seventeen percent of that total. The United States has some thirty-six percent. South Africa, Sweden, Australia have about fourteen percent each.

The next slide, again from the International Atomic Energy Agency, shows estimates of uranium production forecast. It indicates in the lower green section, or green coloured section of the slide, which is not too discernable-- its Canadian uranium production. At the present time Canada produces some twenty-one percent of the world production. World in this sense is western world-- are countries other than those with centrally directed economy such as the U.S.S.R., China and the eastern satellite countries. Another factor considered in uranium refining capacity was the availability of Canadian uranium for export. That is, Canadian uranium that was surplus to Canada's domestic need.

This slide shows total Canadian production from the period 1976 estimated until 1985.

Those data are taken from a publication by the Resource Appraisals Group of the Energy Mines and Resources. The yellow coloured blocks at the bottom are the present domestic requirement of uranium. The orange, or brown colour, is the product available for export. The darker colour is the total uranium production capacity in Canada for the years stated. At present, the domestic requirement is approximately ten percent of the total Canadian production. In 1976, the Canadian production was approximately 4,850 tons of uranium. This will increase over the period until 1985 to an estimated 12,500 tons. In that period, the domestic requirement will increase to approximately twenty percent of the expected Canadian uranium production. In addition to the domestic requirement, a long-term reserve of uranium has been established as a forward supply for Canadian reactors which presently exist. Some 70,000 metric tons of uranium have been set aside to satisfy this requirement.

Now, in Canada, the present estimated recoverable uranium from known ore bodies is estimated to be over 300,000 metric tons of uranium. If one would subtract the 70,000 tons set aside as a domestic reserve, there is some 200,000 dollars--200,000 tons that is potentially available for export.

The last slide we are presenting is world estimated uranium requirements as uranium hexafluoride. It is this uranium hexafluoride that we are proposing to produce, or part of this requirement we are proposing to produce from our new proposed Port Granby refinery. In 1980 the estimated requirement is some 40,000 tons of uranium, and in 1985, 70,000 tons of uranium, rising through to 115,000 tons in 1990 to 175,000 tons in 1995. The present world capacity to produce UF6 is 36,000 metric tons of uranium. The present capacity of Eldorado at the Port Hope refinery is some 4,500 metric tons of uranium. Expansion of the Eldorado refinery at Port Hope is limited by the space requirement of the site. So, it's with this that Eldorado considered looking for new sites for uranium refining and chose Port Granby as its preferred site.

In determining the capacity of the proposed plan, Eldorado had to reconcile these considerations. Capacity had to be sufficient to be economical size, world scale plan, yet not so large that there would be an extended period where an unused capacity would be available, or not so small that it would require additional expansion in the near term. The proposed plant size for the refinery at Port Granby is 9,000 metric tons capacity. This capacity is

in line with the expected capacity of the Canadian uranium industry to produce in the time period, and production from the plant is expected to be at capacity within three years of start up.

In summary, I would like to briefly indicate that the proposed Port Granby refinery meets Canadian Government policies in objectives in that, subject to retention of uranium reserves to meet Canadian requirements, and subject to the state of Canadian policy of safeguard on uranium export, that the export of uranium will be encouraged, and that prior to export resources, specifically uranium, should be upgraded to the most advanced form possible. In Canada at present the most advanced form possible is UF6, or uranium hexafluoride.

Our proposal at Port Granby has taken into account the anticipated growth in Canadian uranium industry, and the increasing market demand for UF6 beginning in the 1980s. The financial analysis carried out by the company on capital investment, operating costs, and revenues, indicate an acceptable return on investment. While there can be no absolute guarantee of success of the project, Eldorado's relationships with electrical utilities, and its performance as a reliable nuclear supplier, gives us

confidence that we can continue to share in the increasing UF6 market.

I now turn the mike over to Gordon Colbourne, who will give us a short but more detailed discussion of the Port Granby project.

MR. COLBOURNE: Mr. Chairman, panel members, I would like to take just a few minutes to tell you specifically what we plan to do at Port Granby. With your permission, I would like to move out to the centre of the room. I can look at the slides a lot better there. What I would like to do is run briefly through what we call the Port Granby Plan. As most of you know, Port Granby is located about eleven kilometres west of Port Hope, and fairly close to the Town of Newcastle, located right on the shore of Lake Ontario. This is the way it looks right now. Those of you who are familiar with the area will recognize the Lakeshore Road running along here. Up along here there are the CN and CPR tracks. You can almost see the 401 in the distance. This is the way it looks now. This particular area is where we have our existing 28 acres waste management site. This is the area that the new refinery will be built and new waste management site a little bit further up.

This is a picture of the model that

shows what it will look like after the Port Granby Plan has been completed. Incidentally, the town, Village of Port Granby is right down here.

Now, the Port Granby Plan itself consists of three specific projects. The first one is remedial measures on the existing 28-acre site; secondly, the establishment of a new waste management site; thirdly, the design and construction of a new uranium refinery. I will deal with each one of these in turn, but very briefly.

This is the diagram of the existing 28-acre site. The method we have been using is a trenching method similar to what we propose for the new site. This one has been in use since 1955. There are two small streams running through this site and into Lake Ontario. We have sampled the water in Lake Ontario on this sort of a sampling grid off Port Granby, off the west stream, and off the east stream, a thousand metres east. Every one of those samples were drinking water quality. So, while there may be some pollutants leaving the property, the water itself, right along the shore, is of drinking water quality.

Nevertheless, we still plan and are currently now treating the water. We have put in a reservoir to trap the water from this stream -- a second

one from this stream, and we are pumping it up to a sedimentation lagoon. We are adding chemicals to precipitate the arsenic and uranium, and we are putting it then into a treatment lagoon, and back into an open drainage ditch, back into Lake Ontario. I can assure you that the water that is now going back into the lake is of drinking water quality. The other thing we have done, as far as remedial measures are concerned, is we have dug this open and closed drainage ditch across the top of the property. Now, that one has had the effect of lowering the water table so that less of the water is running down through the residues.

Now, the second part of our Port Granby Plan is the establishment of the new waste management area. This is a cross-sectional view from the lake, through the existing site, through the area where the refinery will be built, and to the waste management area towards the north end of the property. This is the bedrock. I believe it's a limestone bedrock overlaid by alternate layers of very, very dense till and sand. The actual burial we propose to do in the till layer. The method of burial-- I will not go into great details, but we merely intend to dig a trench above the water table and to put the residue, which is depicted here in white, in compactions, so that

the residue is not open to the atmosphere or to elements at any time. We will put in two, three, four layers, whatever it takes to get good compression in the depth of the hole we have. We will cover it with soil, with sand, with a layer of bentonite, which is impervious clay material. On top of the bentonite we will have more sand and then just ordinary fill. Any water that falls on the site will be stopped by the bentonite, will be collected in these pipes and transmitted around the site to the lake. As Mr. Grant indicated, we will, at a later date, get into many more details of the waste management project.

Now, the third part of our Port Granby Plan is the design and construction of a new uranium refinery. Now, this particular refinery is going to take its feed, yellowcake, from Ontario mines. It is going to produce as its output, as Mr. Dakers indicated, uranium hexafluoride, UF6, all of it for export. Since in Canada we use only ceramic UO2, we have ample capacity at Port Hope for the foreseeable future. Capacity of the plant will be 9,000 metric tons per year. Some of the utility requirements, a fairly heavy electricity hold, 10 megawatts. If we use bunker C oil, we will use about 3.3 million gallons. But, right at the moment, we are doing a fairly

1 detailed study on whether bunker C, some other type of
2 oil, or maybe natural gas would be the best. We need
3 quite a lot of cooling water as EIS has indicated.
4 Here are just a few slides. I will
5 not go into the details of the processing because we
6 will be here all night. That is what the yellowcake
7 looks like when it comes to us from the other mines in
8 Canada. It comes to us in usually 45-gallon drums,
9 usually by truck, but sometimes by rail.
10 This is the UF6 plant at Port Hope
11 where we are currently producing UF6. It is a pretty
12 plant. We tell people they are merely kept by the
13 company for the employees' recreational activities.
14 Nobody believes us. We ship our product, UF6, in either
15 10- or 14-ton containers, and are shipped by truck to
16 the diffusion plant. Some of it goes to the United
17 States, some of it goes to Russia-- wherever our
18 particular customer directs that we send it.
19 Some of the other economic benefits
20 of the new refinery are the payroll. We expect to have
21 it around 350 during construction, and about 150 people
22 permanently. We will pay a grant in lieu of taxes. As
23 a Crown corporation, we are not on the tax roll as such,
24 but we pay a grant in lieu. The grant in lieu is usually
25 right to the dollar that the taxes would have been.

The major contribution is to charities, recreational activities and so forth in Port Hope. We would expect to do the same in any area in which we are located. The capital cost of the plant right now is estimated at about 80 million dollars.

Before we actually build the plant, we need a number of approvals. One of them is the financial approval by the Federal Government. That's not only because of this plant, but Treasury Board approves all of our capital expenditures, whether it is a new typewriter for a secretary, or a new 80 million dollar plant. We also need environmental approval by the Environmental Assessment Review Panel, of which you are all familiar. We need approval by our regulatory agency, Atomic Energy Control Board.

Now, very briefly, the environmental assessment, we have run through phase one where we look at the seventeen sites. Then we did phase two, where we looked in detail at the four sites, and then phase three, where we looked at Port Granby in a full four season study. That then was produced in the EIS, of which most of you have seen it. We are now into the public hearings. The cost has been mentioned before, and it is in EIS, but it has cost us around one million dollars to date.

One of the things we have not actually decided yet is our road access from Highway 401. The real access is no problem whatsoever. We have the CNR spur just to the north of our property. We can come by road, get off the 401 at Newtonville, south to the Lakeshore, east to the site, or we can get off at Newtonville, go north to number two, east to the Hope-Clarke boundary, and south to the Lakeshore, get off at Westleyville, south to the Lakeshore, west to the site, or we could go any other way. This is the topographic map of the area. That's the 401 interchange at Newtonville. As I said, we could come down to the Lakeshore, along here through Port Granby and into the site. That is the site. That's the Hope-Clarke boundary, and that's the Lakeshore Road. We could come down to this road, go across that boundary road to the Hope-Clarke boundary, down and in. We hope during these particular sessions, any one of you who have any suggestions as to the best method of getting from the 401 to the plant ,well, we would be happy to hear it. Before we make a decision, we intend to talk to municipal people, road superintendents, Ministry of Transportation and Communication, and anyone who has a meaningful input.

Just in closing, we are convinced

that our Port Granby Plan will, first of all, incorporate the most modern engineering method in both the refinery and waste management complex. Secondly, we are convinced that it will be a substantial economic benefit to the community, the province, and in fact, to all of Canada. Thirdly, we are convinced that it will have an insignificant impact on the environment. Thank you, Mr. Chairman.

THE CHAIRMAN: Do you have any further speakers, Mr. Grant?

MR. GRANT: No, we don't, Mr. Chairman.

THE CHAIRMAN: I think, in view of the rather restricted area, maybe we should take a ten minute break and reconvene at 8:15 and hear from our first intervenor.

--- SHORT RECESS

THE CHAIRMAN: I understand that Eldorado would like to make a brief clarifying statement. Then we will proceed with the intervenor. Mr. Grant?

MR. GRANT: Mr. Colbourne neglected to mention, when he was itemizing the various levels, of boards of approval required for the construction of the refinery, the many, many levels and

areas of approval that would be required to be secured by it from the various provincial bodies, such as the Ministry of the Environment for air emissions controls, and the various other controls and regulations that go into the establishment or construction of a chemical refinery. So, in addition to those he mentioned, there are a whole series of infra structures, or approvals, that need to be acquired, and they will be sought by Eldorado prior to the operation of its refinery.

THE CHAIRMAN: Thank you, Mr. Grant. I would now like to move to the first speakers on our list of intervenors, from Atomic Pollution, Mr. John Veldhuis and Roger Paul. Are you speaking one at a time or--

MR. PAUL: I will be very brief, Mr. Chairman. For the reasons I expressed to you earlier, we are at this time in no position to contribute anything to these proceedings. I would say again that the reason that that is the case is because we have been left up in the air over the question of funding. We are hopeful of being able to retain an expert to go through this brief with us and to explain to us just exactly what it means, and what its implications are. At that time, we will be able to contribute to

these proceedings.

In view of your intimation to me at the commencement of these proceedings that we would not be prejudiced by our lack of involvement in phase one, and that the opportunity would be available to us in phase two, at this time we will refrain from contributing to this proceeding. Thank you, Mr. Chairman.

THE CHAIRMAN: Thank you.

MR. BROWN: Mr. Chairman, may I just intervene for one moment? I think for Mr. Paul's sake, and for the people he represents-- my name is Dennis Brown. I act as the Counsel for the provincial government. I might point out to the people here tonight that the provincial government has prepared a brief, and it is available. The expertise within the different ministries has been put into that brief. The people connected with many of the ministries, the Environment, Transportation and Communications, are going to be made available. So at least for the sake of Mr. Paul and the people he represents, there will be some expertise, and expertise for the people of this province, from the government of this province.

THE CHAIRMAN: Thank you, Mr. Brown. We also have a number of other speakers.

None are specifically scheduled for this evening. Do you have, Mr. Timmermans, a list of people who are interest in speaking further this evening?

MR. TIMMERMANS: No.

THE CHAIRMAN: Is there anyone who is on our list who is prepared to speak this evening? If not, we could now go to having individuals speak, if you would like to make a point or an item of concern at this time? If you would like to do so, please come to the microphone and state your name and your concern. It appears there is nobody concerned this evening. Therefore, I see no point in staying in this room any longer than necessary. We may as well adjourn until tomorrow at one thirty when we have a list of speakers scheduled for that time. I see a hand has now come up.

MR. DYKSTRA: Mr. Chairman, my name is Robert Dykstra. I am a regional councillor in the Town of Newcastle. I would like to ask a question to you. Is it possible for a person like myself, if in due time during the process I wish to speak on my own behalf and not on council's behalf, will I be given that opportunity?

THE CHAIRMAN: Yes, it's quite possible. We would like to ask that you register with Mr. Timmermans, who is running the black box down

there, or Mr. Warder, on my left, when you know that you want to speak, and we will fit you in, as far as possible.

MR. DYKSTRA: Thank you, Mr. Chairman. I was not here at the start of the meeting. Most likely you explained this, but I thought I should get it clarified.

THE CHAIRMAN: No other points? We will adjourn till one thirty. We will not adjourn again.

MR. LAIRD: Mr. Chairman, when might we receive the documentation, for instance, that Mr. Brown from the Province of Ontario said that he had available? Have those briefs been submitted to the panel?

THE CHAIRMAN: These briefs are available now. Mr. Brown may want to speak for the Ontario--

MR. BROWN: I understand, Mr. Chairman, there were not enough brought down. I will make sure, certainly by the time we reconvene tomorrow afternoon, that there will be sufficient to hopefully hand out one to whomever wants one.

THE CHAIRMAN: You might contact our panel secretary in room 107 at any time tomorrow morning if you are interested in additional briefs, or

just before the Hearing tomorrow.

MRS. LAWSON: Mr. Chairman, Pat Lawson from Port Hope. I cannot accept Mr. Colbourne's statement about the water quality off the dump sites being fit for drinking. On the basis of Eldorado scientists' own documentation, the levels of radium seeping out of the east gorge are seventy-nine times above that of the acceptable provincial standard of 3 pico-curies per litre. The levels of arsenic are something like one hundred ninety times. Mr. Chairman, I submit to you that it is against the laws of this province for a person to flush their toilet into the lake. I will not accept that this company can flush radium, arsenic and uranium to this level into our lake, and then say because of the vast body of water, that is Lake Ontario, the dilution is all right-- the dilution makes the water quality all right. Mr. Chairman, hundreds, thousands of people in this province drink this water. They use it to swim in, They use it for their crops. It is an absolute necessity for the existence of the majority of people in this province. On the basis of this company's past record, I am not convinced that their future estimates are going to be acceptable for the people who live in the Province of Ontario, and particularly for the people

who live adjacent to this proposed new refinery and dump site.

THE CHAIRMAN: Thank you, Mrs. Lawson. Do you wish to make any statement on this Eldorado?

MR. GRANT: No, not at this time.

THE CHAIRMAN: Any panel members?

MS. DEROW: I would like to ask for your documentation to be submitted to the panel, please.

MRS. LAWSON: Yes, we will.

THE CHAIRMAN: Mrs. Lawson, I notice you are also scheduled to speak later. Did you intend this one to count?

MRS. LAWSON: No, Mr. Chairman, I have a lot more to say.

THE CHAIRMAN: Any other panel members? Any other questions on the statement made by Mrs. Lawson? Is there any other member who wishes to speak?

I think this time the meeting is adjourned until one thirty tomorrow.

--- ADJOURNED APPROXIMATELY 8:40 P.M.

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FEDERAL ENVIRONMENTAL ASSESSMENT BOARD

Sitting at the Flying Dutchman
Motor Inn, Bowmanville, Ontario,
on Wednesday, September 28, 1977.

Volume 2

BEFORE:

John Klenavic	-	Chairman
Reg Lang	-	Member
Ms. Ellan Derow	-	Member
Murray Duncan	-	Member
David Scott	-	Member
Kim Shikaze	-	Member
Peter M. Bird	-	Member
Clement W. Cheng	-	Member

Michael Warder	-	Acting Secretary
Brian Timmermans	-	Information Officer

APPEARANCES:

C.T. Grant	Counsel for Eldorado Nuclear Limited
S.E. Frost	Representative for Eldorado Nuclear Limited
R. Dakers	Representative for Eldorado Nuclear Limited
G. Colbourne	Representative for Eldorado Nuclear Limited

I N D E X

--- Upon commencing at 1:30 p.m.

THE CHAIRMAN: Good afternoon ladies and gentlemen. My name is John Klenavic, and I am chairman of the Environmental Assessment Panel that has been established to consider the proposed Port Granby refinery by Eldorado Nuclear Limited. I made about a fifteen minute speech last night, and I hope I do not have to repeat all of it. I thought I should quickly cover a few points in it before we get into hearing from our speakers for those that did not attend last night.

I might mention that the purpose of our panel is to prepare a report to the Minister of the Environment on the proposed project. We have options in our report to basically recommend whether the project should go as is, go with modifications, or not go at all on the basis of the environmental impact. In explaining the Hearings that we are having over this week and next week, I would like to outline the procedures that we are following. We have based these procedures on previous experience in other hearings we have conducted in other areas of the country. This is essentially the first phase of the hearings, and it has three purposes: to clarify

points that are not understood with reference to the project; to identify deficiencies in the environmental impact statement, which will permit the panel to make decisions on whether the deficiencies require rectification by the proponent; and finally, to identify concerns that the public may have about this project. Based on these phase one hearings, the panel will produce deficiencies if necessary, and also issue for phase two, a list of specific issues that will be addressed on specific number of days. This process in our second phase of the Hearings allows us to discuss these specific subjects, the expert witnesses to be available on specific days, and also members of the public interested in specific issues to attend at that time without having to spend a lengthy period of time on hearing subjects that may not be of direct interest to them.

I might also point out that we had asked technical agencies of the federal and provincial government to review the environmental impact statement and to make these available to the public. These reviews will be provided during the course of these phase one Hearings, and are available for examination.

Our procedures are that I have

asked the intervenors to speak for approximately fifteen minutes, with no objection to speaking less, which would allow approximately the same length of time after that for any questioning which is directed at clarifying what the speaker said, not at debating with him or her on the content. As I mentioned before, once we understand what people are saying, we can then move to our second phase Hearings to have a meaningful discussion on them. Also, the panel will be asking questions at any time. With regard to anyone in the audience who is interested in speaking but has not formally registered, if time permits at the end of each half-day session, we would welcome anyone who wishes to come forward from the floor and make brief statements. Such people should register with Mr. Brian Timmermans, who is down on the right beside the black box. He can take you in the order that you come to see him.

I also mentioned yesterday that we are recording these proceedings, and I would like each speaker to please identify themselves when they begin to speak in order that our transcript will reflect who is doing the talking.

We have a schedule which is being updated virtually hourly. The latest one that you

have at noon will have some changes by this evening. This will be coming out again, and is available from our public information officer, Brian Timmermans, or our panel secretary. The hearings today are scheduled from 1:30 p.m. to 5:00 p.m., approximately, and from 7:00 to 10:00 this evening, similarly tomorrow. Next week we are starting at 7:00 o'clock in Newcastle on Tuesday.

I might also add that we have received a number of letters from individuals in the area. These are being collected-- will be presented to the panel and will be available for any other people who may be interested in seeing them. Naturally if any people prefer to comment in writing, rather than by making verbal presentations, these are welcome. I should also point out that we certainly do not require any individual to use counsel. If you want to speak, that's what we are here for, to listen. It's not necessary to have counsel in order to stand up and speak.

I would like to quickly introduce our panel members. Their biographies are available in the press kit which is available from Mr. Timmermans. The panel members are: Ellan Derow; beside her is Clement Cheng; beside him is Peter Bird; and the far

end on my right is Reg Lang. Starting on the far side on my left we have Kim Shikaze; beside him Murray Duncan; and beside him is David Scott. The gentleman to my left is Mr. Michael Warder, who is our panel secretary. Mr. Warder can be located in room 107 of the hotel during normal times when we are not here, when he is not changing schedules and running around doing things like that. To assist him, in the room we have down here on the front right, two advisors, Gerry Grisak and Eric Miller, who have expertise in areas that may come out during these hearings. Beside them, closest to the black box, we have Brian Timmermans and Pat Donovan, who are also on our staff and are available in room 107 if any questions come up.

The table at the front right with the little sign that we can see, perhaps not you, has the word intervenor on it. That is for use of the persons scheduled to speak in sequence. On the other side of the table with the green cloth are the representatives from Eldorado. In the table in front of the white screen we have reserved for representatives of the media.

We have produced the procedures for your information. The only other point to mention in there is that there will be no smoking in this room,

please. Those of you who were here last night know that it got rather stuffy without having smoked. I think that's all I have to say. We might now proceed.

MR. SANDERS: Mr. Chairman, I have a point of order. I represent Oshawa and District Building Trades. We resent the fact that our money-- our tax money is being used to finance various federal departments that are doing studies-- environmental impact studies. Since this is our tax money-- we know the real purpose of this hearing is to simply delay the building of the Eldorado plant. This is what we do not like to see.

Now, what we do want to do is make a petition to the Federal Government to do the same thing as George Kirby, the Environmental Minister of Ontario. This is to lift the Environmental Protection Act hearings for the Darlington plant. This is what should be done. The Australians are moving into the market. We have to get in for ourselves. Therefore, this meeting should be cancelled and the plant should start being built tomorrow morning. That's the official motion of the Oshawa District Trades.

THE CHAIRMAN: I understand you are scheduled to speak this evening?

MR. SANDERS: Yes, but if you cancel, however, we will not need to speak.

THE CHAIRMAN: You certainly have got a point there. I do not intend to cancel these hearings. We went through this last night. We have now forty-eight people who have considered that they would like to speak and we would like to hear them.

One small point. You mentioned that you represented the Building Trades Consul. Could you give your name also?

MR. SANDERS: Rick Sanders.

THE CHAIRMAN: I would like to proceed with the hearings. We hope we will hear the rest of your brief this evening.

MR. SANDERS: We will do that under protest.

THE CHAIRMAN: Thank you. Our first intervenor is entitled Adjacent Landholders. This is adjacent to the proposed refinery property. They are represented by Mr. Bruce Laird.

MR. LAIRD: Thank you, Mr. Chairman. I am sitting down here, and I also have my back to the audience which I feel very badly about. I think I am going to have to do it because I have to speak into the microphone. I apologize to the audience

for my back.

Mr. Chairman, panel members, audience, I represent ten individuals who own five parcels of land immediately adjacent to the Eldorado site. Two individuals are Edna Webster and Margaret Elliott. They were here last night, Mr. Chairman, but they were not able to come today. Pauline Payne and Telmig Corporation-- both Pauline Payne and John Gimblett, who is the owner of Telmig, are here with me. Maurice Desourdy and Doris Desourdy, David Grant and Donna Grant-- they are very interested in these proceedings, Mr. Chairman, but they are at business, or attending a family and cannot be here. Howard Hubbard was here last night, and Mary Hubbard. This is the group that I represent.

You have before you, Mr. Chairman-- and I apologize again to the audience that I could not produce enough of these things to give to everybody-- but you have before you a sketch of the site and the proposed location of the buildings and the waste disposal areas. I realize these locations could change, but we just took it at that. You have marked A to E, the parcels of the people that I represent.

I might say, Mr. Chairman, I do not intend to read my brief. In my brief I describe who

these land owners are. They are a group of people who have long been associated with the Port Granby-Port Hope area. They know the area very well, and are sufficiently concerned to have asked me to represent them here today. They decided not to come here as ten individuals and speak to you, but to speak through me. They are certainly available if you want to ask them questions individually, or in any other way.

Finally, about the people I represent, five of the eight dwellings in the Hamlet of Port Granby are owned or occupied by these land owners. I make that point simply to say that SEAP and other groups that are presenting briefs here before you are not the only individuals who are most directly concerned. As a matter of fact, I feel, Mr. Chairman, that these individuals are more directly concerned because they live right next to the property than really anyone else. Now, that's not to take way from the concerns of other people which are valid.

Mr. Chairman, it is not our intention to develop a long, lengthy and technical challenge at this point. In reading the terms of reference of these proceedings, phase one as it's called, I do not believe that it's appropriate-- I will be very frank with you, Mr. Chairman, I have the

same problem that Mr. Paul does and others, who are advising and talking with SEAP. We have found the materials long and very complicated and very confusing. I do not hold myself out to be a scientist or an environmentalist. I am only a lawyer, Mr. Chairman, even though I will try not to act like a lawyer at this hearing. I am quite happy to do that, by the way, to not have to adhere to the rules of evidence and things like that. It's fine with me. If I start talking like a lawyer, point your finger at me, or do something like that, and I will straighten myself up.

The issue that I want to address myself to very briefly is our concern, and what we consider to be a deficiency-- deficiencies in a general term because we do not have the technical expertise. I picked up two--three briefs this morning. One is from the province and the Fisheries and Environment Ministry, and so on. I have not had a chance to look at those things. I have not got the technical list of deficiencies. I certainly do have a point of view of the people I do represent. I want to give you our position. Perhaps I will just start in reverse order and give you our position, and perhaps summarize at the end as well.

We are not here to contest the

general philosophy of nuclear energy, production or use. We are not an anti nuclear group, we are not here to stop process which we see of development of power in this country, and elsewhere in the world, and we do not want to turn back the clock. The reason we are here is that we are looking for answers, and we are expressing concerns. Our concerns are numerous. The problem is that we know what we hear on the press, we know the things that we read. What we don't read, that's what's raising questions. We are here perhaps to ask questions as much as anything else. I hope, just as a side, you will not take Mr. Grant's suggestion that we save all of our questions for Eldorado until the end because I would like to think that as points are raised in the course of this hearing that we can point to Mr. Grant and say what is the answer to that. If he does not have it, he can ask his experts or whoever else might have the answer. That is the way we will find out exactly how this matter stands.

I would like to thank you and your panel for going out on the site this morning. I regret that I was not able to be there. I had a previous engagement. I was very worried about you. I was afraid you would get lost in the mud and not get

back. However, I was talking to the secretary and he tells me you did not even get muddy. You must have done very well. I appreciate the fact that you went out and looked at the site, because I think looking on a screen, or table model, so on, does not really give a true picture of at least one of the problems, perhaps many of the problems that we see.

I hope you observed when you were there this morning, that the back portion of the Eldorado project site, as it rises up from the lake where the refinery will be and where the waste disposal areas will be, are on a plateau-- what I would call a plateau. That may not be the technical term. However, they are on a rise of land. I would hope that you also noted the way the land falls off from the site, particularly that back portion of the site. As we see it, not as experts or scientists, or anything else, but as people who live and own property down there, the land falls off right into the areas-- the lands owned by the individuals I represent. If you look at your map on the westerly boundary, you will note that the creek area runs in and out of the Eldorado site and down through the properties of the individuals that I represent, parcels A, C, D and E to the lake. I think this map accurately reproduces

material that is in the Eldorado project study. It is a continuing process of water down from that plateau. Each day I talk to the land owners, and after it rains, they tell me how water has flown down off the plateau, how they find that sand and gravel gathers farther down. There is no doubt that there is a continuous flow of water to there. Mr. Chairman, it's not just the lines that are marked on our sketch and on the sketches of Eldorado-- there are little clefts that run through there caused by erosion. That water is coming down in several spaces, I would submit that are not marked on any maps but that my people are aware of. Similarly, parcel B on the eastern side shows a direct flow of water off that plateau into that property, and down into the creek that runs down into the lake on the eastern side of the property.

We are concerned firstly about the flow of water, where it comes from, what is in it, where it will go and the effect it will have. I know that is not a technical statement, and I apologize for that.

When we are dealing with a major industrial plant of this kind that deals with a process which is potentially dangerous to human beings, vegetation, and animal life, I believe that we must

take the utmost caution in developing a site of this kind. I believe that the Atomic Energy Control Board also takes that position. I think Eldorado does too, and I want to say that. You may be aware, Mr. Chairman, that there has been what's been called an exclusion zone set up-- sort of a guideline, one thousand metres out from the centre of the plant. Now, that's taking consideration that the building may be shifted a little bit. But, we are looking at roughly a thousand metres. This is an area in which the AECB, and others, feel that is required as a buffer zone, as an area that should be under the control of Eldorado, or whatever government department or company would be involved in a project like this. I think there are good reasons. I do not want to go through all those. I think I know some of them and I think you know some of them. I would like to know more about the thousand metre exclusion zone and who arrived at it and the reasons that they have. That is certainly a question that I would like to have answered by someone.

You might just note, Mr. Chairman, that we have drawn the one thousand metres out from the sort of location of the plant. It runs right through the properties A and B, and

comes very, very close to the other three properties that I represent. If for no other reason sort of an imaginary barrier has been set up, and we see that, we want to know why, and what it means, and what effect it could have upon us,-- all of the details on that.

I might just say that water and its flows are not-- our concern, also extends to air emissions, security procedures-- and when I say security procedures, I do not know what I am thinking, but all I can tell you is that there are a lot of people that get very excited about this project, and projects of its kind. There are people that walk right into the Bruce Generating Station. No one stopped them. They could have been saboteurs, they could have been anybody. For people who live right around the area, Mr. Chairman, this is a concern.

MR. SANDERS: That's not true. They did not get in.

MR. LAIRD: Well, I stand corrected, but that's what I got on the news. Perhaps I got the wrong story.

Also the general disruptions and inherent dangers in being neighbours to a facility of this kind. It's just a general fear. Now, those are our concerns, Mr. Chairman. We have tried to-- I am

not sure that I have not had a lot shorter time to review these materials than Mr. Paul and his associates, but we have tried to go through this material and review it. There are a couple of things I have just mentioned briefly.

First of all, the guidelines set down in October of '76 by the panel asks Eldorado to provide data on resources, or conditions that could conceivably be affected by the project. Well, the glaring error, from our point of view, is they have not studied the adjacent land. We feel this is important. This is essential, particularly in view of their guidelines and the points that I am bringing up here today. We also have read in the design proposals that certain-- I will not quote, but there is a quote in the brief, Mr. Chairman-- certain plans are being made to prevent contaminants discharging to these streams, and so on. We are not satisfied at all by what we have seen in the study-- in the proposals that have been made. We feel these are entirely insufficient, and that this information must be given out. Not only for us, but for everyone else in the area who is concerned.

Just to sum up the material as we see it, we find the proposals reflecting the plan

monitoring, process upset, and accident analysis, to be very vague and incomplete. I find the study very incomplete on certain things. I find that that aspect of it is very incomplete, even to someone who doesn't know that much about it. It just doesn't answer the questions.

In conclusion, I would say that we do not propose the-- oppose the Port Granby project at this time. We are coming to this hearing with an open mind. But, if we cannot receive satisfactory answers to our concerns, then we will have to oppose it.

We submit that insufficient data has been gathered with respect to the adjacent lands in question. Until such time as this information has been gathered, analyzed and passed onto us, the project should not be allowed to proceed.

We would further ask that a reasonable period of time be given to us to consider the information which will be provided. Our limited financial resources and lack of technical expertise should be considered when determining the time allowed for preparation, the time between phase one and phase two. It would be of great assistance if the panel or the appropriate ministry could provide financial and

other resources-- I am the second person who's mentioned that-- to us in order to assist in our preparation after this initial phase. We would also ask that the panel ensure that the cooperation of the various government departments and agencies involved-- I know there are many here today and I have spoken to them over the last two days-- I am sure that's going to happen. I just scribbled a couple of notes here and I just want to make sure that I have covered all of my points.

Well, the representative for Eldorado said last night that he felt that everybody recognized that the dump site-- disposal site was a concern, so let's not talk about that, let's accept that as a concern and go on to other matters. Well, Mr. Chairman, that is totally unacceptable to us. We want this discussed. We didn't hear very much about it last night. We want it discussed and we want to know what the situation is, because obviously that's the key to the whole thing, the water flow and many other things. This has to be discussed here. Sure it is a concern, but let's lay the groundwork of what concerns are and where we go from here.

Finally, I would say, Mr. Chairman, in view of the fact that we are speaking first, and

much information will come out, I would like to have the opportunity, if it's appropriate-- I am in your hands to speak very briefly before you wrap up phase one, just to add whatever we may have concluded at the end of that. It may be positive and it may be negative. Right now, I am giving you a qualified go, go with modifications-- I am just trying to remember what your three-- go with modifications, or something like that. But, at the end of this we may have to change our position, but I would like that opportunity. Thank you very much.

THE CHAIRMAN: Thank you, Mr. Laird. To answer some of the points you brought up, I think presumably our secretary has noted your desire to speak at the end. If the time permits, I see no reason why that cannot be done.

The question of Eldorado answering questions, I think I have to leave it to their good judgment whether they can answer the questions immediately, or whether they wish to provide answers-- I think we agreed on Thursday of each week. Some of the questions may be technical and some not. You have raised a number of points. I think it might be appropriate to have a two minute break to organize questions or concerns that anyone may want to bring up

to you. We will take two minutes and get questions or comments organized.

--- SHORT RECESS

--- UPON COMMENCING

THE CHAIRMAN: May we come to order ladies and gentlemen. Ladies and gentlemen, before the questions and clarification phase, I would like to have the panel members ask questions of clarification or to comment. I then propose to move to the audience that may wish to also ask questions, not excluding Eldorado. I also might mention that we have an additional speaker this afternoon. Those of you who have the list can add Professor Cyril Carter from Trent University. In terms of the panel, any gentlemen on my left?

MR. SHIKAZE: Mr. Laird, you mentioned some reference between the people you represent and the SEAP organization. Just for my own clarification, what is the relationship, if there is any, between the group you represent-- or some of the people you represent and the SEAP organization?

MR. LAIRD: I think two out of the ten land owners I represent are members of SEAP. There is no official connection.

MR. SHIKAZE: No official

connection, apart from the duplication of the membership?

MR. LAIRD: No.

MR. SHIKAZE: The other question I have is with regard to the residents who are, I presume, long-term residents in the area, who have sort of phased out the Port Granby dump situation for I guess since 1955-- since it's been in operation. I wonder whether they would be prepared to come forward and state their views or opinions with respect to the operation to date, the problems, or whatever concerns that they might have had in the sort of past operations, and whether some of the steps now being taken, and some of the steps that are now being proposed are improvements, or whatever?

MR. LAIRD: Well, I would have to speak to them. Are you suggesting that happen now, or some time--

MR. SHIKAZE: I think we can leave it for some later date, but I would be most interested in hearing their views.

MR. LAIRD: I will speak to them and get back to you.

THE CHAIRMAN: Murray Duncan?

MR. DUNCAN: Mr. Laird, there is a

comment on page four in the second paragraph which refers to satisfaction of land owners-- or the lack in the satisfaction of the land owners, or as an alternative regarding negotation of the sale of their property, and arbitrary expropriation procedure. I wonder if you would clarify that and bring out its significance in your views in the-- let's say for the basis of the actual presentation that you have made. How significant is this item in the whole context of your presentation?

MR. LAIRD: Well, I think it's certainly a possibility of selling the property, and walking away from the situation at Port Granby. It is a real one. I act for ten different people, five different parcels of land. I think within my group the views vary to some extent. But, I think probably as a final result, they are all prepared to go if necessary. Some of them-- the ones who live there, want to stay. If they can be satisfied that their concerns are answered and that the safeguards are there, then they will stay. I think I have said that in the brief. As far as the arbitrary expropriation procedure, obviously there is a possibility of expropriation here. I felt it was my duty to put it in. They would be very upset if it got to that point. As I see it, this whole procedure is based on something quite different than

that. We are coming to this hearing, and to all of these discussions as reasonable people, I think. We would not want to be in a position where our backs were put to the wall.

MR. DUNCAN: The arbitrary expropriation procedure sort of bothers me. How did you envisage this arising, and what is its significance here? I do not see it.

MR. LAIRD: Well, this is the ultimate. Maybe I am being too dramatic in my words. I am not even saying expropriation procedure has to be arbitrary. It doesn't.

MR. DUNCAN: It's just a matter that the expropriation procedure per se-- how would we get around to the point other than considering the needs for expropriation in this particular study?

MR. LAIRD: Well, I see that as a possibility. I stand to be corrected. Eldorado could expropriate land anywhere-- Port Granby, or anywhere else.

MR. DUNCAN: You have heard nothing up until this time of expropriation procedures?

MR. LAIRD: None at all.

MR. DUNCAN: Thank you.

THE CHAIRMAN: Peter Bird?

MR. BIRD: Mr. Chairman, I wonder if I could just explore that same question a little further to see if perhaps I understood something differently from Mr. Laird than Murray has. Have you perhaps concluded the possibility that expropriation may be necessary in order to comply with the one thousand metre exclusion zone? Would that be the rationale that would lead to-- is that in your mind of the rationale that would lead to such action being taken?

MR. LAIRD: Yes, I think that might be one of them. A thousand metre, I can only rely upon that as something I read. I don't know how it was arrived at, whether it's a good amount. It seems to be from the information we have. But, sure, that would be one of the reasons it might happen.

MR. BIRD: It would seem to me that it may be appropriate for us to get-- as you, I think, asked in your statement for clarification, about the rationale for a thousand metres--if we could have a better understanding of how firmly, rigidly, it may be adhered to, or whether in fact two of these properties intruding slightly within that thousand metre range would be regarded by the Atomic Energy Control Board as significant in their licencing requirement. That could

clear that issue up, it would seem to me.

MR. LAIRD: It would be certainly interesting to know. I am not saying that I am going to agree to everything that has been said and withdraw the position I am taking.

MR. BIRD: I am only suggesting in terms of the expropriation itself.

MR. LAIRD: Yes.

THE CHAIRMAN: Reg Lang?

MR. LANG: Could we ask Eldorado representatives to tell us what the justification is for the one thousand metre limit?

THE CHAIRMAN: Mr. Grant?

MR. GRANT: My information with respect to the one thousand metre limit is it has no magic in fact at all. It is a figure, which I understand has been used by the Atomic Energy Control Board, particularly with reference to nuclear reactor facilities. But, it does not need to be a thousand metres, and it does not need to be one hundred metres. My information is that the so-called exclusionary zone is selected to determine the standard of exposure or impact at the fence line of a property. So, if you have a thousand metres-- your fence is one thousand metres from the refinery, then the test requirements

of the Atomic Energy Control Board have to be met at that point. If, however, you only have one hundred metres, or five hundred metres from the refinery, then you still have to meet the same standards or tests at that point. So, there is no magic in the one thousand metres at all. In fact, we don't intend to have one thousand metre exclusionary zone in connection with this refinery. We are satisfied we will meet all the Atomic Energy Control Board tests and exclusionary zone-- something in the order of eight hundred metres, if I recall the arithmetic correctly. There is no magic to the one thousand metres. It's just simply a means of prescribing that whatever that distance is, you have to meet the tests that are established by the Board.

THE CHAIRMAN: Just to clarify, Mr. Grant, I understand you would intend to meet all the AECB standards within the property you now own?

MR. GRANT: The Atomic Energy Control Board not only has to licence the construction of the refinery, but also they must licence the method of operation. It has to examine in very great detail a number of requirements, and whether or not we are likely to meet those standards.

MR. LANG: I just want to pursue that further. Have you done specific studies

concerning the proposed refinery on the one hand and what the width of that zone should be on the other?

MR. GRANT: Yes, we have.

MR. LANG: Can we have the results of those studies?

MR. GRANT: They are basically in the EIS, and have already been filed. If there is some additional information required, we would be happy to provide it if we have it. It falls into a number of areas, such as, air emission and radiological emission. Basically it's set forth in the EIS. You will hear more from the Ministry of the Environment, federal and provincial environment, as to whether or not we have in fact provided all the information required. We will deal with that.

THE CHAIRMAN: Mr. Cheng?

MR. CHENG: One of your major concerns seems to be water quality of the streams. Can you just briefly outline what kind of specific uses are now occurring on those streams for the water?

MR. LAIRD: Well, there is a cattle operation in the land marked as part A on the western boundary of the property. The other property owners marked C, D and E aren't in the farming business, but they certainly use the stream in terms

of their use of the property, and are concerned about what might be flowing through the stream. The same would apply on the other side-- the other parcel marked B. It's used for farming purposes. Water flowing down into a pond that's marked there, and down a creek, into the other creek-- the same argument would apply. It's farming and individual use that we are concerned about primarily.

THE CHAIRMAN: Ellan Derow?

MS. DEROW: This morning I understood that there was some smelt fishing in the stream that passes parts A, B and C. I know nothing about smelt fishing. What sorts of people may fish smelt? Is this a public, private--

MR. LAIRD: I don't have the answer to that.

MS. DEROW: Can anyone come on these properties and fish?

MR. LAIRD: Pardon me?

MS. DEROW: Can anyone come on these properties and fish?

MR. LAIRD: I think that's what happens.

MS. DEROW: Whether they know about--

MR. LAIRD: Oh yes. The general public comes and fishes there. Some people ask for permission and a lot of people don't. That's as I understand the situation.

THE CHAIRMAN: Thank you. Are there any questions from the audience?

MR. BREWDA: Yes. My name is Joe Brewda, and I am representing the Oshawa Building Trades. I would like to make a couple of points. First of all, the presentation given by the previous speaker is totally irrelevant. In fact, even if it could be demonstrated that the farm land adjacent to the proposed refinery was in fact somehow harmed by the building of the refinery, that fact has nothing to do with the issue of whether we should go with the refinery or not.

THE CHAIRMAN: We are not here to discuss issues. We are here to discuss points of clarification. As I explained in my opening remarks, we will get to the issues in the second phase of these hearings. If we start now in a debate of this nature, we will be here an awful long time on speculation.

MR. BREWDA: I would certainly want to prolong--

THE CHAIRMAN: Do you have a

question of clarification that you would like to ask?

MR. BREWDA: Well, I think it is clear that the testimony is irrelevant and a waste of time.

THE CHAIRMAN: Mr. Grant, I believe you indicated you wanted to make--

MR. GRANT: I have two points of clarification, and one point of information, which I do not think my friend mentioned to you.

First of all, he indicated that I said the other day, and I will endeavour to clarify this, that I suggested that we save the questions until the end. It wasn't my intention to do that. I do not think I said that. I think what I said is that we will save the answers, as you mentioned, until a convenient time, at the conclusion of groups appearing. I still would like to do that. We certainly do not want to suggest to people that questions not be raised. We are here to try and answer questions. I hope people do not think we try to stop that.

The second thing he said, which I think requires some clarification-- he said that I suggested that we should not discuss the dump site at this time. I did not say that. In fact, not only did I say we should discuss the dump site, but we should

discuss it at an issue session where it can be discussed in the kind of depth that my friend, and I am sure the audience, would like to see it dealt with. It is not my suggestion that we not discuss the dump site. In fact, I hope we have as many questions as possible, not only about the old dump site, but the proposed new residue disposal area, so we can deal with those questions effectively and properly at the time of the issue session.

Now, the last matter I have to mention is the fact that my friend neglected to mention to you, and that is, his client, Telmig Corporation, which is apparently the owner of part B shown on the plan which he filed with you, is a corporation that acquired that property-- the corporation I understand is owned by Mr. Gimblett and by Mrs. Payne. That corporation acquired that property under an option which it obtained after it was fully known that we proposed to build this refinery. In fact, the option was not exercised by Telmig Corporation until approximately May of this year. Now, relative to the question-- or Mr. Laird's answer to the questions which were raised concerning expropriation, I think it is relevant for the board to know-- or the panel to know that in the case of expropriation , the owner of

the land is paid fair market value for his property. Now, I can understand Mr. Laird's client being concerned about that prospect. The fact is, having purchased this property from the long-time owners, Mr. and Mrs. Eadon, for a price of approximately $70,000.00, Telmig Corporation endeavoured to sell this property to my client for $410,000.00 before it even acquired title. Since that time it has become more reasonable. It's reduced its price to only $280,000.00 for this land.

Now, if in fact Telmig Corporation is using this land for farm purposes, it must be a very unprofitable farm operation. With respect to the other clients of Mr. Laird over on the west side, we have stated clearly to Mr. Laird, and to his client, that if they can demonstrate that we are likely to cause any harmful effect upon their use and enjoyment of that stream, we would sincerely take measures to avoid any such effect.

MR. LAIRD: Do I get a chance to respond to some of these questions?

THE CHAIRMAN: Yes, Mr. Laird. These were questions of clarification. I hope you are going to clarify.

MR. LAIRD: Now?

THE CHAIRMAN: Yes.

MR. LAIRD: I am not sure that it was a question. What Mr. Grant is trying to do is equivalent to character assassination, I think. I regret that. Whether or not the implications which he's laying before you are true, that's not the reason we are here. We are here to express concerns about this refinery. I would only add that to say that whether or not what he says is true, is really irrelevant to what we are saying here. But, it is true that I have had discussions with Mr. Grant, and it is true that certain numbers have been discussed, and it's true that Mr. Grant has expressed interest in buying-- or Eldorado buying three out of the five properties that we are talking about here today. None of the individuals have sold on that basis. Everything I have said before is absolutely true about them wanting to stay, and their concerns. The acquisition of the exercising of the option, Mr. Chairman, did occur. That is factual.

THE CHAIRMAN: Thank you, Mr. Laird. I think perhaps we have time for one more question and then we'll move on to the next new speaker.

MR. SANDERS: My name is Rick Sanders, and I am representing the Oshawa Building and

Trades. I have a couple of questions for clarification from Mr. Laird. Do you have any data, Mr. Laird, on how many pounds of meat is grown on the property immediately adjacent to the plant, how many gallons of water, approximately how many cubic feet of air, how many pounds of bananas they would be suggesting growing on the property, how many cups of coffee, and how many pounds of oranges?

THE CHAIRMAN: Well, Mr. Sanders, I have difficulty in seeing how the quantity of bananas consumed on that property relates to--

MR. SANDERS: I mean grown on the property.

THE CHAIRMAN: I think I can say right now that there are no bananas grown on that property.

MR. SANDERS: Thank you. That's my point. I would like to hear about the--

THE CHAIRMAN: Well, let's--

MR. LAIRD: There is a valid question followed by several others that I do not think I have to respond to. However, it is a dairy operation, and cattle do go down the ridge into the area where the creek is, and do drink out of the creek. Now, I do not have the rest of the

information.

THE CHAIRMAN: Could you tell the approximate size of the herd?

MR. LAIRD: Fifty head.

THE CHAIRMAN: Thank you. I think we should proceed to our second speaker. Maybe the current intervenors could stand up and give the new intervenors room at the table. We can maybe take a one minute break so they can get organized. Then we will hear from Mrs. Pereira.

--- SHORT RECESS

--- UPON COMMENCING

THE CHAIRMAN: Can we come to order, please. Ladies and gentlemen, our next speaker is Mrs. Pereira listed as a resident of Port Hope. I understand we do not have her brief at this time. Perhaps, I will turn the microphone over to you, madam. It is all yours.

MRS. PEREIRA: Mr. Chairman, members of the panel and members of the audience, I should first like to put on record my regret that for a hearing of great importance both to our environment and to--

THE CHAIRMAN: Excuse me, madam, I do not think it is coming over the microphone. The

switch may not be on.

MRS. PEREIRA: For a hearing of great importance both to our environment and to Canada's nuclear industry no funds have been made available for an independent study of environmental and related questions concerning the establishment of a new Uranium Refinery and Waste-Dump at Port Granby. To do so would have been particularly appropriate in the light of the fact that no environmental hearings at all will be held for the proposed new Nuclear Power Station at Darlington, only a few miles further west from Port Granby.

A second study would have enabled this panel to clarify issues and aid it in the interpretation of scientific data as presented to it by Eldorado Nuclear Limited. For to a certain extent-- and this is the main point I should like to make in this presentation-- the recommendations you will eventually make and the decisions you will arrive at will be value judgments. Whether or not we will have a new refinery and waste-dump at Port Granby will not depend on scientific data alone, but even more on the ethic through which they are examined and interpreted. I hope to make this clear below.

The objective of this hearing is

to clarify and identify any deficiencies in the Environmental Impact Assessment made by MacLaren Ltd. for Eldorado. I shall confine myself in this presentation mainly to possible deficiencies in the waste-dump proposal.

Generally, two points should perhaps be kept in mind in these hearings. The first is that the new refinery will not be the only nuclear installation on Lake Ontario but would be one of many. There are now twelve nuclear power stations operating in the Great Lakes Basin, with a total of 20 nuclear reactors; four of these power stations are situated on Lake Ontario, (in addition, of course, to the Port Hope Refinery). All are using the water of the lakes for condenser cooling. Thirty-two additional reactors are under construction or planned. From the 1976 report on radioactivity in the Great Lakes, compiled by a special committee of the International Joint Commission, and as reported in the Port Hope Evening Guide August 24th, 1977. While, as the report states, most of the nuclear installations do not pollute the Great Lakes waters above limits set in the proposed radioactive water quality objective, one should keep in mind the second general point, and that is that radioactive water, air, et caetera quality objectives

are set with no absolute scientific data to support them. As Doctor Aitken-- at the time Chief Radiologist of the Ontario Ministry of Health-- at a public meeting in Port Hope stated: the numbers are set arbitrarily and very much a matter of judgment. That was last year in February. Standards of permissible radiation exposure vary also from country to country and are still a matter of scientific controversy.

Keeping these two general points in mind, then, I should like to focus in particular on some aspects of the proposed waste-dump for the proposed refinery. I should like, first, to question the wisdom of its proposed location. The waste to be deposited in the dump comes, firstly, from the operations of the refinery itself; secondly, from the old Port Granby Waste-Dump; and thirdly, will eventually include the refinery itself. The anticipated life span of this plant is fifteen years, according to the MacLaren report, maybe somewhat longer. It is anticipated that any contaminated parts of the building and machinery-- probably even all of it-- will then be buried in three acres set aside for the purpose in the dump. The same procedure will presumably apply to the nuclear power stations themselves (Darlington has an anticipated life of thirty- forty years). Where these-- together with

their waste, which is now in storage-- will be buried, seems very uncertain, but there appears to be a reluctance on the part of the regulatory bodies to move waste too far away; I assume because it is costly to do so. If - as seems possible now - we have by then come to rely on nuclear power for our energy needs, new stations will again have to be built and new waste dumps engineered.

All this takes out of circulation and perhaps sterilizes for a long time to come a great deal of land directly and indirectly, through the part of Ontario that is anticipated to experience the greatest increase in population. Climatically it is the most favourable; the Department of Agriculture states that Ontario's best agricultural land stretches about thirty miles north from the lake; and various social factors combine to attract people to Lake Ontario's north shore to the extent that by the year 2000 the population in this area will have at least doubled, according to the official plan of 1976 of the Regional Municipality of Durham, (as quoted in the MacLaren report). One may, naturally, assume that this population will continue to grow and wish to settle in this region beyond the year 2000. At that time - if not long before that - it will become very important to the

neighbours of nuclear installations and waste-dumps to know how acceptable limits of radiation pollution really are.

This, then, is the second point I would like to raise. The radiation exposure standards, as mentioned above, are open to question. As to the setting of them I should like to quote from the International Commission on Radiological Protection: a) all practices involving radiation should have a positive net benefit; b) all radiation exposures should be as low as reasonably achievable, social and economic factors being taken into account.

This was quoted by Doctor Prince, President of the Atomic Energy Control Board in a letter to Doctor Porter. A copy of this letter was sent to a local resident. This statement of policy may be interpreted to mean that practically any level of radiological pollution may be justified if the social and economically perceived need exists for more nuclear power, for example, or for less clean-up. After all, how many clean-ups on the scale of Port Hope's can a country afford? Port Hope's has cost to date 4.6 million dollars. I should not like to speculate on the cost of cleaning out the unsatisfactory old Port Granby Dump. The quoted passage may also be

used to excuse on economic grounds a relaxation in the supervision of nuclear installations. Hohenemser and others show in a study published this year (in "Science" April 1st, 1977) that as nuclear power grew rapidly in the 1970s the regulatory staff per power plant did in fact decline. These scientists also state that it may be improper to rely on improvements in management and technology with increasing experience, for learning maybe in whole or part cancelled by increasing human carelessness, as nuclear power proliferates.

As to the exposure estimates for individuals themselves the MacLaren study defines the "critical individual of concern as a person spending all his time at the location of the highest off-site dose rate. One also assumes that this person, in addition to direct radiation from deposited contamination and to exposure via inhalation of contaminated air, each produce grown at the boundary (of a nuclear installation) eats beef from cattle grazing at the boundary and drinks milk from cows which feed at the boundary." In the case of a nuclear waste dump that has eventually been landscaped over all this is of course quite possible to happen, considering the longevity of the toxitity of the dump. Also, maximum permissible exposure is usually applied to adults.

However, in the case of a civilian population one should really foremost consider children, whose cells are more susceptible to damage. Table four point five point six in the MacLaren report puts fractional annual exposure at the boundary at 0.007 for adults and 0.017 for infants. What must again of course be remembered is that both the exposure rate and the permissible dose are estimates and matters of judgment. I should in this connection also refer the panel to a study made by a University of Toronto radio biologist, Gordon Clark, on pine trees grown near a waste dump here. He showed that pines planted near the dump site were soon stunted and their seeds aborted at a high rate compared to a control batch.

It may, of course, be argued that the new dump has sufficient safeguards to prevent a significant amount of radiation to escape. In my third and final point I should like to argue that this is assuming a lot. Chapter three at page forty-nine of the MacLaren report states that: monitoring of the site will continue as long as the site is in operation. This monitoring consists of periodic sample taking and analyzing for moisture changes to establish the integrity of the bentonite blanket, of checking I assume potentiometers buried in the trenches as to the

containment of all contaminants within the waste management area. For appended two to the MacLaren report states 8:5 that "it appears as though.. at Port Granby, while existing wells are relatively safe, there could be some leakage of pollutants into Lake Ontario." Pollutants in question here are nitrate, fluoride, and uranyl iron.

Furthermore both the eastern stream and Port Granby creek discharge outside the ENL property. The "engineered structures" that will have to be installed to prevent contaminants discharging into these streams will no doubt also have to be serviced.

Considering that radium 226 half life is 1602 years and it will have reached equilibrium in ten thousand years we therefore assume that our economic, social and political institutions will remain intact for at least the next two thousand years. We assume that our descendants will be vigilant over that length of time. We assume that an injunction not to build permanent structures over the waste dump will be known and enforced two thousand years from now. We assume that weather patterns will not change and that the essential bentonite blanket will always have sufficient moisture to keep it tight.

We assume that bentonite performs two thousand years hence in praxis as it does now in the laboratory. None of the predictions as to its performance are, or can be, based on direct experience. In the MacLaren report, it is also stated that "the long-term effects and the mechanism of root penetration in bentonite have not been established and would be difficult to evaluate".

We assume that erosion will not expose the dump before radium two hundred twenty-six decays to a safe level. The MacLaren report comes to the conclusion that pronounced erosion may be cyclic and to a degree related to the periods of above average lake level. These conclusions are based on historical and photogrammatic data and cover respectively 1900 to 1973 and 1952 to 1975, and on a ground survey based on erosion data from 1971 to '73. No doubt long-term trends may be to a great extent determined from geological data, but, as the report says, "it would be foolish to speculate when or if erosion might reach the proposed new waste management areas since the currently observed erosion rates are not representative of past rates and not necessarily representative of those in the future."

Elsewhere in the report, data observed over two years are providing in the basis for

decisions affecting this environment for at least the next two thousand years. Should one assume that everything will remain the same? Is one justified in doing so in particular when these decisions affect a potentially highly populated area?

Every time I stand by the lake shore I remember that we do not own this land. I think of the people who lived here for hundreds, maybe thousands of years in complete harmony with nature. I also think of the settlers who arrived here at the lake barely two hundred years ago. Within their understanding and in their judgment, their actions were guided by the desire to build a better future for their children. And then I asked myself what our generation is going to leave to those who come after us. Are we acting really according to our best judgment and in their interest when we leave them acres and acres of nuclear waste to look after - for centuries to come?

Whether we will assume that responsibility must, in the end, be a matter of value judgment.

THE CHAIRMAN: Thank you, Mrs. Pereira for a very well presented brief. I think your brief covered many of the points that the panel has also individually been concerned about. I very

much hope you can be present in the second phase when we get to the issue of the waste disposal. I am sure that the representatives from Eldorado would like to have you present too. I do not know if the panel members have any questions, but I certainly haven't. I thought it was very complete.

MR. BIRD: Mr. Chairman, might I just ask whether Mrs. Pereira would leave us with a copy of the brief? I thought it was a very detailed--it contained a lot of things that I would like to look at more carefully. I tried to make some notes during your presentation, but you covered such a large amount of territory. I would be very pleased if you could leave us a copy.

MRS. PEREIRA: Yes.

MS. DEROW: I was wondering if you could give us a copy of Gordon Clark's article on vegetation near disposal dumps? We need as much information as possible.

MRS. PEREIRA: You could get together with the Port Hope Evening Guide. There was an article about this on the 23rd of February, '77. They could probably provide you with further details of that.

MS. DEROW: What is the name of

that paper?

MRS. PEREIRA: Port Hope Evening Guide.

THE CHAIRMAN: Any other panel members?

MR. DUNCAN: There are a couple of points in your brief that would be worthwhile clarifying, if you could-- in any documents that you provide. One of them is the claim you made that any level of radiation is acceptable, and in using for your judgment, the ICRP be as low as reasonably achievable basis. I wonder if you can clarify that, and do it in the context of ICRP. The other one I have is that children are ignored in setting radiation protection regulation. I would appreciate some background on how you drew that conclusion.

MRS. PEREIRA: Your first question-- I told you the statement was contained in a letter by Doctor Prince to Doctor Porter.

MR. DUNCAN: Surely not the statement containing any level of radiation was acceptable?

MRS. PEREIRA: Well, he is quoting the report. I will tell you the real point. Doctor Porter tells-- it is a suggestion of limiting

dose rates as interesting. However, it receives scant report from the International Commission, which recommends a system of annual dose limits coupled with the injunction that and then comes the quote which I have here:

"a) all practices involving radiation should have a positive net benefit;

b) all radiation exposures should be as low as reasonably achievable, social and economic factors being taken into account."

He then continues in his own words. The only area dose rate is specifically restricted is in the occupational exposure of reproductive capacity.

MR. DUNCAN: I believe if you check the documentation for the Porter Commission, you will find that there is a lot more behind that statement, and may be out of context. There are other people in this room who I am sure have some background in that area that might want to aid in clarification, or ask any questions about clarification of this particular topic-- or later on when we can discuss it technically in the next technical session.

MRS. PEREIRA: I was shocked by this statement myself, because as I say, in my brief,

I can just--

MR. DUNCAN: I was too. That's why I would like to know how you drew that conclusion.

THE CHAIRMAN: That will come out in the second phase, one way or another. Are there any other panel questions? Any questions from the floor?

MR. BREWDA: Yes. First of all, would you know--

THE CHAIRMAN: I am sorry, would you identify yourself?

MR. BREWDA: I am Joe Brewda, representing the Oshawa Building Trades. First of all, I would like to ask you, can you give a technical explanation, or compare the danger of the waste of the proposed Eldorado refinery and say insecticide, or let's say twenty odd chemicals you will find in any industrial plant in the Oshawa area.

MRS. PEREIRA: Well, as I say, it does not matter--value judgment. Personally, I consider waste from nuclear-- nuclear residue in a class by itself, because it lasts so long-- longer than any other waste we know of.

THE CHAIRMAN: Excuse me. That is the type of question that can come out in the

second phase when we have technical experts that might be able to give that comparison. I think it's probably a bit unfair to ask that of Mrs. Pereira. As I say, I do not want to get into an argument. If you have another question of clarification, we would be happy to hear it.

MR. BREWDA: At the conclusion of your report, your technically incompetent report I may add, you stated-- this is a question of clarification-- you stated the issue is ultimately value judgment; is that correct?

MRS. PEREIRA: That's correct. I made this clear in my report what I meant by that.

MR. BREWDA: If in fact we do not build Eldorado Refinery, and if in fact uranium is not used for power production in Africa and elsewhere, how would you value starvation of thousands of people because of a lack of nuclear energy?

MR. CHAIRMAN: I do not think that question relates to the presentation--

MR. BREWDA: Well, it is a value judgment.

THE CHAIRMAN: I understand we might get into that in the second phase of these Hearings, if it's required. At this time we are

clarifying what the speaker has said. I do not think your question does anything to clarify what she's already said. I see there is another person who would like to speak-- or I saw a hand up.

THE CHAIRMAN: We would like to record what you are saying, so come to the microphone.

MR. FISHLACK: My name is Bob Fishlack. I am a student at Trent University. Just one point of order. I am wondering, Mr. Chairman, if you can make a decision on the two individuals that are from the Board of Trade-- point out that they had nothing to contribute to the hearing at this time, and if they can be asked to leave, because there is, definitely, in my opinion-- I think the majority of the people here think they disrupt this meeting.

THE CHAIRMAN: Thank you. I would like to point out that I do not wish to malign the Oshawa Board of Trade--

MR. BREWDA: Let me say that, first of all, we will be giving a presentation this evening. Secondly, it is irrelevant what you or anyone else think about specific issues. This is a question of science, it is a question of industrial production. What various hippies, or other

individuals may think--

THE CHAIRMAN: Order, please.

MR. BREWDA: It has absolutely no relevance.

THE CHAIRMAN: I think we have had enough on this subject in reference to the statement, or presentation by Mrs. Pereira. Eldorado Nuclear, do you have anything you would like to say?

MR. GRANT: You said a number of occasions throughout your presentation-- which I thought was very well done by the way-- you seem to question things of value judgment. As I quoted you, you said in referring to certain standards, they were set arbitrarily as a matter of judgment. My question is, what other method would you use to set such standards if it weren't judgment?

MRS. PEREIRA: It's a value judgment. This is why you cannot just rely on scientific data. Because Experts say one level is safe, others say no level is safe. So, eventually we will have to come, or the panel will have to come to a decision what risk we are willing to take. That's the value judgment.

MR. GRANT: I realize that.

MRS. PEREIRA: You cannot say

definitely there is no risk. I think I would defy anybody to prove there is no risk. On the other hand, you are doing-- what your experts tell you, you make your decisions, other people make theirs.

MR. GRANT: My question was, is there any other way to arrive at a decision in your judgment, other than by a judgment-- a value judgment performed by some people? You seem to be opposed to the notion that, for example, certain standards have been set arbitrarily as a matter of judgment. My question is, did you have in mind setting, for example, those standards by some other manner than judgment?

MRS. PEREIRA: I am not making that point at all in my report. I am just suggesting -- I am not saying that it's long or anything. I am saying it is a value judgment. That is all I am saying.

MR. GRANT: Okay.

THE CHAIRMAN: Thank you, Mrs. Pereira. I understand coffee is available at the back. I suggest we take a ten minute break now for coffee and then we will hear the next speaker. Would you please come back in ten minutes so we can resume promptly at five past three?

--- SHORT RECESS

--- UPON COMMENCING

THE CHAIRMAN: Our next speaker is Doctor Fredrika Prantl for the Federal Department of National Health and Welfare. Doctor Prantl.

DR. PRANTL: Mr. Chairman, ladies and gentlemen, there are many different aspects to the environmental impact assessment document. I will be speaking only of those which are of concern to the environmental radioactivity section of the Radiation Protection Bureau which is part of the Department of National Health and Welfare Canada.

The area which is of concern to us is the radiological impact of the new project upon the health of the population. We examined the document for satisfactory evidence that the public will not be exposed to unnecessary radiological health burdens from the new project and that estimates of radiation exposure to the population in the document were correct. We believe that it is in the public interest that we have subjected the document to ruthless examination. It should be remembered, however, that this is done with the intent of being constructed. It is hoped that our comments will be received accordingly.

From our tabled comments you will

see that we have come to the conclusion that the document has not answered all the technical questions which have been raised. We have indicated in our report what these questions should have been, and where further information is needed to fully answer them. Our particular concern in a general sense was that a document uses maximum permissible limits in a way to suggest that there exists no problem for the public health as long as the radiation exposure remain below these limits.

The concept of radiation protection to which Canada has subscribed, however, is that recommended by the International Commission on Radiological Protection, ICRP.

In the 1973 document, the Commission has stated "As any exposure may involve some degree of risk, the Commission recommends that any unnecessary exposure be avoided, and that all doses be kept as low as is readily achievable." This principle is known under the abbreviation of ALARA, as low as readily achievable.

The Commission also made it clear that estimates of the radiation exposure to the population must include calculations of the dose from all sources of radiation. Consequently, any release or

any exposure that can be prevented should be prevented, although it might be made at levels less than maximum permissible.

Although we acknowledge efforts which will be made to keep product losses to a minimum, and control plant upsets quickly, it has to be said that a document in its present form does not provide satisfactory evidence of following the ICRP recommendations fully, and implementing them in the design and radiological assessment of the new project.

Another general point of concern was that the principle of radiological health protection, which is to base the estimate of the public health burden on the worse case conditions to be conservative, was not followed to the extent necessary. Although, this principle has been acknowledged in the document, we found that the calculation did not very clearly address this point at all times. Specific examples were given in our tabled comments to illustrate where we found the calculations catchy and not entirely satisfactory, or where they seem to have been based on two optimistic assumptions.

Within the limited time here, I shall only briefly give you two examples. One, the radiological impact from delivery, moving, handling,

storage, waste treatment and disposal of radioactive material, has not been assessed adequately and was in fact largely ignored. The calculations of the radiation exposure of the population-- this is the second point-- were based upon annual release that plant capacity of 9,000 metric tons of uranium per year with future capacity of a plant as estimated at 13,500 metric tons per year of uranium, which is fifty percent higher. Therefore, it seems that in future plant releases will presumably also be fifty percent higher, and consequently also the estimate of health burden on the population. In the evaluation, this has been ignored.

At this moment I will not go into more details which have been dealt with in our tabled comments, of which I expect you all have received a copy. In total, we have tabled and commented in specific technical terms of fifty-one points in the EIS document, covering six areas of public health concern which require clarification, quantification, corrections, or additional information. We are looking forward to obtaining this information at the earliest convenient time for our further consideration evaluation.

At this stage we were concerned primarily with examining the radiological health impact of the new project on the public, and to insure that a

concerted effort will be made by all responsible federal and provincial authorities to insure that all requirements for protecting the public health have been duly met before the project is approved. However, our department also wishes to examine in detail all aspects of occupational exposure to workers in order to insure that the requirements for protecting their health have also been met in a satisfactory manner.

You will understand, Mr. Chairman, ladies and gentlemen, that because of present inadequacies and open questions related to protecting the health of the public and workers from exposure to radiation and radioactivity, our department wishes to await the satisfactory answers and corrections be provided before a departmental position for the new project will be put forward to you.

Thank you kindly for your attention.

THE CHAIRMAN: Thank you, Doctor Prantl. Are there any questions on the statement, or the paper from the panel at this stage?

MS. DEROW: Yes. Yesterday we discussed some of the various agencies-- regulatory agencies which would give the okay-- the go ahead, not just our recommendations to the Minister. I was wondering if you could describe how your agency is

involved in setting standards for this particular installation? What you would like and what you would like to see, -- to what extent do you actually regulate and are enabled to insure that these standards are met satisfactorily?

DR. PRANTL: The regulatory agency in Canada-- all nuclear matters, is the Atomic Energy Control Board. That department is served by making recommendations to the board on the standards and health concerned matters, of course. Would this answer your question?

MS. DEROW: Yes. I wanted that point of clarification.

THE CHAIRMAN: Mr. Shikaze?

MR. SHIKAZE: Doctor Prantl, I share your concern on page four of your document with respect to some of the vague statements that are made throughout the EIS. My question to you is in terms of the areas in which your agency is interested in. Do you feel that these statements can be more quantitative, in view of the information?

DR. PRANTL: Indeed, in some of the tables that MacLaren Limited and Hydrology Consultants have prepared for Eldorado Nuclear Limited, there was quantitative information that could be

incorporated in a text to quantify, and presumably there must exist, also, data, which have not been incorporated so far in the text, which would enable them to quite easily quantify the statements.

MR. SHIKAZE: Another question that I have makes reference to the fact that I believe in the EIS, Eldorado and consultants make reference to a number of times the existing Port Hope operation. Would your department and your bureau particularly have any information that would substantiate-- have you been doing any monitoring at the existing location which either verifies their information, or provides additional information which would help the panel to determine whether there are deficiencies or not?

DR. PRANTL: The way we normally operate on matters that concern the province is we provide all the help that we can--that the province is requesting from us. Would that answer your question, sir?

MR. SHIKAZE: Not quite. In your presentation--

DR. PRANTL: We are not carrying out a monitoring program at the present moment in time around the existing facilities.

THE CHAIRMAN: Any further

questions from the panel?

MR. BIRD: Yes, Mr. Chairman. I note in the material that has been tabled by Health and Welfare, there is reference to a number of new ICRP documents that have been published, which appear not to have been used by the consultants in preparing the EIS. Presumably access to these documents can be made readily available to the consultants? It might be useful if some of the more appropriate material contained in them -- I don't know whether you have them already in summary form-- some of the documents from my recollection are pretty bulky and contain a great deal of information. Would it be possible for you to extract some of the more appropriate tables and graphs, and so on, that are relevant to the computations needed here for the use by the panel, as well as by the consultants?

DR. PRANTL: I do not know in which way you have really meant that to be handled. If we can be of any use and assistance to the panel, we would gladly be so. We, ourselves, of course, have a great interest in the area and have to do these calculations on a daily basis. If we can help you with our expertise, we would gladly do so.

MR. BIRD: I might just pursue it for a moment, Mr. Chairman. On page six of your

1 document, you refer to the fact there's been a series of
2 new and more stringent ICRP recommendations published.
3 I would be interested to see just what those are.
4 DR. PRANTL: I can gladly make
5 them available to you.
6 MR. BIRD: On the following page
7 you talk about the use by the consultants of the USNRC
8 Guide and the IAEA material. But, the dose to
9 individual members of the public has not been
10 calculated. Then you refer at the bottom of the page to
11 certain data from ICRP Publication 23--
12 DR. PRANTL: Yes. For example,
13 that's a newer publication, which
14 has no metabolic factors but can easily be
15 incorporated in the calculation.
16 MR. BIRD: It would be
17 interesting for us, and certainly for the consultants,
18 to have ready access to what those particular randoms
19 are. You quoted some of them.
20 DR. PRANTL: Yes.
21 MR. BIRD: I am not sure if it was
22 not included in ICRP 23 or not. But, you have not, for
23 example, included the annual water intake per child.
24 You have given other factors for the child, and given
25 the standard man, but--

DR. PRANTL: This was not deliberately excluded. ICRP also suggests in certain areas that children are not always the critical group. If they are, they might incorporate a most stringent recommendation for what they call reference man. In this way, it's taken care of.

MR. BIRD: I am afraid that confuses me. Are you saying as far as water intake is concerned, it's more appropriate to use a standard reference man in place of a child?

DR. PRANTL: ICRP has made that recommendation.

MR. BIRD: Seems somewhat surprising to me since the metabolic functions--

DR. PRANTL: Yes, you are correct, sir.

MR. BIRD: Well, I find it just a little difficult to go from the comments that you have made here to the--

DR. PRANTL: I would gladly write up a paragraph, for example, when ICRP does consider to make those calculations, specifically for children, and when adult, those calculations would be sufficient.

MR. BIRD: I think it will be important for Eldorado and consultants to be able to take

your material, along with any of the supplementary information that you give, and produce for us recomputations. I would like to ask one more question, if I may? It's not related directly to this brief, I do not believe. I am aware that there has been produced as part of the review exercise for the Great Lakes and Water Quality Agreement, which Canada and the United States have signed, consideration of what has been called refined radioactivity objectives for the general ambient water quality. These have not been accepted by the government as of yet, but they are certainly under consideration. It would be of some interest to me, as a member of the panel, to know whether in fact in the design considerations for this plant your release rates have taken into account the new objectives, should they be accepted? I recognize that they may not be accepted, but I am aware that they are very much more stringent than the ones which exist in the present Canada-U.S. Water Quality Agreement. So, there is a question that I put to Eldorado and expect to have a follow-up on it.

THE CHAIRMAN: Ellan Derow?

MS. DEROW: Yes. On page three you note that the radiation from other facilities, the impact, -- this radiation on the population has not been calculated. I wonder if you could describe the

sorts of facilities within what you might consider a critical range that your agency is concerned with at this time? To put a range around this installation?

DR. PRANTL: When we have said that neighbouring sites-- when we spoke of neighbouring sites, of course, it was mainly of concern with the waste management sites that are neighbouring. You see, if you do a pre-operational survey on this site and you measure, for example, existing air concentration of uranium, or whatever you are specifically concerned about, then you actually have already a value which shows the effects of the present installation. So in this sense these values, of course, are of great interest, and they can be incorporated also in those considerations.

MS. DEROW: I was particularly interested if your facility was working on prediction say the radiological impact of the Darlington facility added up with the impact-- the radiological impact in this facility, and predicting and looking at this solargistic effect.

DR. PRANTL: I think one has to look at these effects. It is not our intention to request such a thing from, for example, Eldorado Nuclear. This has to be done at a different level.

Eldorado Nuclear is specifically requested to present information on this particular project.

MS. DEROW: I believe in the guidelines solargistic effects are requested; are they not?

DR. PRANTL: I would have to look up the guidelines to make sure. As a health department, we are indeed very concerned about the solargistic effects of all pollutants, be radionucoides or other.

THE CHAIRMAN: Eldorado, do you wish to make any comment?

MR. GRANT: First of all, I would like to bring to the attention of the speaker, that it is my understanding in relation to matters concerning the health of workers--which has not been dealt with in any depth in the EIS-- that is a matter with which we have to satisfy the Atomic Energy Control Board in considerable detail. In fact, that will be done at the appropriate time, not only in terms of radiological health, but also in terms of general accident protection, and normal things you will find in any chemical factor. That's why we didn't deal with that particular issue in the EIS.

DR. PRANTL: You are quite correct. Obviously the regulatory aspects have to be

submitted to the Atomic Energy Control Board. We have an interest in the area, as you can appreciate, and we can deal with the issue at a later date. That is quite fine and acceptable.

MR. GRANT: You cannot actually get a licence, as I understand it, until we satisfy our regulatory body--

DR. PRANTL: Yes.

MR. GRANT: I do not think that's really an environmental impact problem with which this panel be directly concerned as much as the Atomic Energy Control Board Safety Organization working in conjunction with your good selves.

DR. PRANTL: Yes.

MR. GRANT: We do have one other comment. Eldorado and its consultants have diligently, both yesterday and this morning, studied very carefully the presentation provided yesterday and today by the Health and Welfare. We have approximately thirty-two fairly major areas of comment and objection to the matters raised in the paper, which leads us, as I see it, with a number of choices. We are prepared to deal with those matters today. Our best estimate is that it would take about three-quarters of an hour or an hour on the part of representatives here to deal with those questions

in a meaningful manner. That is one alternative. The second alternative, which I personally favour, is that we would be prepared to provide our comments on the thirty-two or more areas in writing and submit those comments to the panel, so that they will be available for consideration by the panel before next Tuesday's session. We would like to have tried to have them done for tomorrow, but it does not give us enough time to do it in a written sense with proper footnotes. The earliest we see is we could have it probably some time before next Tuesday, but certainly not tomorrow. The third alternative is that-- it is your decision, Mr. Chairman-- if we could cast this whole matter over to the issue area, if you chose to identify it as such, and then we could deal with it at that time. Perhaps a combination of the second alternative and the third alternative might be useful.

THE CHAIRMAN: Thank you, Mr. Grant. I think it will come down to the accommodation of the second and third alternatives. I think the written answers will be acceptable in this case, and if it could be provided by next Tuesday, then we can arrange to have them available for other members of the public who may be interested, and also any replies, and that would give time for Doctor Prantl and

her colleagues to study the replies before we get to the issue stage a little later on.

DR. PRANTL: I think it is an excellent proposal of Mr. Grant. I think it's the most constructive way of handling it on both sides.

THE CHAIRMAN: We will look for your written replies on Tuesday. Do you have any other --

MR. GRANT: We will try to get them as early as we can, but I cannot guarantee them before Tuesday.

DR. PRANTL: As I said in my statement today, we would be looking forward to your information as early as convenient.

THE CHAIRMAN: I think if we also bear in mind that other speakers may well raise the same point, or some of them-- so presenting your answers later would probably cover-- avoid having to answer the same question a number of times.

DR. PRANTL: In fact, Mr. Chairman, I have been studying the other documents that were available yesterday, and some of the concerns are overlapping. So, you know--

THE CHAIRMAN: I think we've agreed that you will provide answers in writing Tuesday, if at

all possible. Also probably there will be an issue stage where we will get into more detail discussions. We have more questions from the panel. Peter Bird?

MR. BIRD: Thank you, Mr. Chairman. A follow-up to the question about the occupational hazard and risk assessment. I recognize the role of the Atomic Energy Control Board, and have noted reference in the EIS to the fact that a separate document is being prepared to meet the Atomic Energy Control Board requirements. It does occur to me, however, that there may be in such a document a fair amount of information that would be of considerable value for us. My first question is, has that document in fact been prepared yet, or is it something that is still being worked on? Perhaps I should wait until I hear the answer to that before I pursue it any further.

MR. GRANT: One of the problems in agreeing to present that document to this panel--there is no desire on our part not to present it to you, but the difficulty as I understand it, is this, that before we can even make a serious endeavour to satisfy the requirements of the Atomic Energy Control Board and regulatory group in this area, the plant has to be virtually designed almost in detail. Because of the rather complex nature of this plant, we are not at

that stage yet. I think maybe Mr. Duncan can comment on this. I think what we endeavoured to do is deal with this problem, and safety regulations as far as workers are concerned, in stages. We can isolate the problem in a major sense, and say we will have certain standard things, which we know about; but, as the design of the refinery gets more and more refined, then I understand there are other problems and other exclusions that may become apparent.

THE CHAIRMAN: Peter Bird, have you a further question?

MR. BIRD: I think I understand that concern of yours as well. I think you can perhaps appreciate that it becomes somewhat difficult for us to even make reasonable evaluations of the assessment that you're providing us with respect to discharges, when in fact you make statements that you are improving the technology based on your experience, and proprietary developments have taken place. However, you do not go on to explain just what kind of changes are going to be taking-- going to be produced. If in fact you could even indicate to us-- we are straying away from the radiation question, but it does apply there as well-- what kind of concentration, in the case of radioactivity, are being discharged from your Port Hope works, to

indicate the areas that you have felt a need to develop and improve technology for, and as a result of the new technology that you are producing, what you are now going to be able to produce or release in the new plant, that would be helpful to us in making an environmental assessment. It isn't solely a question of the workers themselves. That is a legitimate concern. It seems important we have other information which I have not yet been able to find in the documentation. Perhaps you would tell me if it's there. Thank you, Mr. Chairman.

THE CHAIRMAN: Mr. Grant, are you able to respond at this time?

MR. GRANT: I can respond to it in this sense. We know pretty accurately what it is we propose to do at Port Granby-- what we would like to do in terms of process. We know pretty accurately what it is we will admit to the environment, in one manner or another.

Our major concern in providing you with this kind of detail information raises a very sensitive area in the minds of my client. That is, basically the question of proprietary information. Once again, I must explain to you that it is not any wish on the part of Eldorado to hold back from you, or

the public, information which is legitimately relevant to your deliberations. However, the way in which Eldorado refines uranium, uranium hexafluoride, is a carefully guarded secret, and I might add a very valuable one. Eldorado has paid very, very substantial sums of money to examine proprietary methods owned by its competitors to see whether or not those methods are as good as, or better than our own. We are very reluctant to give to the panel or to the public this kind of secret information.

However, we will demonstrate--perhaps we can do this in one of our technical sessions, where/ we will demonstrate to you, we hope with satisfactory evidence, what the levels of emissions will be from the refinery. I do not think your concern really is how we get from A to B. Frankly I couldn't understand it myself. I think what you are concerned with is having got to the end of the line, and having started with so much of this nasty stuff, and only getting so much out at the end of ~~the end~~ of the line, what happens to what has got lost. Now, we believe we can demonstrate to you quite satisfactory with what happens to what got lost, and what effect that will have on the environment. I think the time to do that will be in a more detail technical session. Although, we can gather together

some of our experts and deal with it out of schedule, if that was considered desirable.

MR. BIRD: As far as I am concerned, as an individual member of the panel, you struck exactly the note which I think is right. I would not be capable of understanding technical aspects either. I am concerned with the end product, what's happened in the material balance sheet type of situation. I would also agree, as far as I am concerned-- I am placing before you now, as a matter of clarification, a need for that kind of information. I am not suggesting we take the time now to discuss it.

THE CHAIRMAN: Murray Duncan, do you wish to say something?

MR. DUNCAN: I am just clarifying the procedure a bit further along from what Mr. Grant said. The environmental impact assessment stage is only a very, very preliminary stage of a more regulatory process. It addresses the concerns which are defined reasonably well in the guidelines, which don't include occupational aspects per se, because this is something that's felt is within the bounds-- it has been expressed within the bounds of the facility. However, as part of the site approval and construction authorization phases, which are just subsequent to this

some of our experts and deal with it out of schedule.

MR. KIRD: As far as I am concerned, as an individual member of the panel, I attack exactly the part which I think is right. I really can be critic of underlying technical aspects either. I am concerned with the end product, what's happened in the overall balance sheet type of situation. I would also agree, as far as I am concerned -- I am placing before you now, as a matter of clarification, a need for that kind of information. I am not suggesting we take the time now to discuss it.

THE CHAIRMAN: Murray Duncan, do you wish to say something?

MR. DUNCAN: I am just clarifying the procedure a bit further along from what Mr. Grant said. The environmental impact assessment stage is only a very, very preliminary stage of a more regulatory process. It addresses the concerns which are defined reasonably well in the guidelines, which don't include cooperational aspects per se, because this is something that's felt is within the bounds -- it has been expressed within the bounds of the facility. However, as part of the site [illegible]

environmental impact assessment, there is a necessity to know as much detail as is possible at that time, the occupational health aspects which are of concern here, and also, the analysis which would involve making assumptions and setting scenarios of possible incidents that could occur on the plant, and looking at the conclusions. So, it's these aspects that all have to be reviewed before any authorization is given to Eldorado to even proceed with the construction of this particular facility. From there on that leads into the stage which Mr. Grant mentioned, which is the detail design of the plant in terms of arriving at a point where the facility as constructed can then be licenced for operation. That is only based on assessment of the as-built facility. Those are the stages that are being gone through. We are right now back at stage one. So, the occupational aspects will be reviewed and assessed in this second and third phase-- second and third stage.

THE CHAIRMAN: Any questions from the floor? Mrs. Lawson.

MRS. LAWSON: Pat Lawson. My concern is with the exposure of the general public-- radiation exposure to the general public as has been explained by the company and the control board. The

workers who opt to work in this kind of an environment are fairly carefully supervised. However, the same situation has not taken place in Port Hope with the general public. In fact, this company has shown little or no concern for the radiation exposure of the general public. Could I ask you, please, a question of information? Would you consider a level of thirty-two miloram per hour exposure as a hazardous level, safe level-- in what category do you place this?

DR. PRANTL: How long would the exposure time be, please?

MRS. LAWSON: Well, it could be all day. It could be intermittent, or all day.

DR. PRANTL: You see, in deciding whether or not an exposure of this level, or any level is of a health significance, we have to carefully know what duration-- is the duration short-- it would affect human bodies if the duration is long or--

MRS. LAWSON: Supposing this was a person who was working within this exposure area continuously?

DR. PRANTL: In this case, of course, I would have to do the calculations and give you the answer. We would have to assume, for example, that he's been working there one hundred and sixty-eight

hours per week, or whatever assumption we make there, and we have to take it from there.

MRS. LAWSON: Can you tell me now if that's--

DR. PRANTL: Not off hand without making calculations. I am glad to sit down with you afterwards and we can go through it.

THE CHAIRMAN: May I suggest that you discuss it afterwards?

MRS. LAWSON: Yes. But, this level was found by Doctor Douglas Andrews on the main street of Port Hope on Walton Street. He measured this in 1976. Exposure levels that far exceed this have been found in other homes and areas of Port Hope where citizens have completely unwillingly lived and played. They had no idea that they were up against this kind of radiation hazard. So it's just this-- in answer to your brief, I feel for the panel members that, the main focus should be on the public exposure to radiation.

DR. PRANTL: I fully agree with your statement.

MRS. LAWSON: There is absolutely no protection for the public and there is no way in which the public can gain redress if they have been exposed, since it's impossible to prove the level of

exposure. This is an area I feel of concern.

THE CHAIRMAN: I think we may be getting beyond this clarifying question. I understand you will be speaking later. I am sure you will bring that point up. Do we have other questions?

MR. LAIRD: Just a brief question, Mr. Chairman. Doctor Prantl, you spoke of critical range and pre-opt surveys. I was wondering whether in these considerations the Radiation Protection Bureau has considered appropriate buffer zones and exclusion areas for radiation?

DR. PRANTL: We also submit recommendations regarding standards and so forth to the Atomic Energy Control Board. The Control Board sees fit to set the appropriate action levels and limits. Would that answer your question?

MR. LAIRD: I think it partially answers my question. So you do work with buffer zones or exclusion areas in your considerations, in terms of levels that are satisfactory or major conditions, in crossing the lines of levels that are not meeting your conditions?

DR. PRANTL: The entire concern that we have in the document is with regard to what is the public exposure at the exclusion zone-- we

call it the boundary, or away from the boundary. We look at this figure, and the speaker will then tell us what we would like to know.

MR. FAIRSERVICE: Mr. Chairman, may I--

THE CHAIRMAN: Can you wait until the question is finished, please.

DR. PRANTL: This is specifically why we have said we would like to see complete calculations that we are in possession of--

MR. LAIRD: Well, based on the calculations you have done to this time, have you set a specific exclusion zone or buffer zone? I am thinking in terms of space, not in terms of level.

DR. PRANTL: Our department is not involved in setting buffer zones. We are involved in this particular exercise in looking at what happened to the boundary, or what happens further away, is there satisfactory evidence of recommendations of the International Commission on Radiological Protection, are those recommendations followed, and if not, what improvements can we suggest that they are being followed. This type of-- so, the permission, of course, suggests or recommends these standards in order to protect interest of the general public, or an

individual member of the public. Both are of concern.

MR. LAIRD: Just one more supplementary, Mr. Chairman. Based on the information you now have in the information that has been provided to you from Eldorado, have you come to any conclusions -- have you established at least on a tentative basis what this buffer zone might be? There may be more than one-- this I don't know. But, have you come to any tentative conclusions to this time?

DR. PRANTL: We are not coming to tentative, or any conclusions about a buffer zone. What we would like to have is enough information, which at this moment in time we feel we do not have, in order to assess what an individual member at the boundary would receive in terms of dose, which is a measure for the radiation exposure, or what the population in general may receive in terms of dose.

MR. LAIRD: Thank you.

THE CHAIRMAN: Yes, the gentleman behind. Could you identify yourself?

MR. FAIRSERVICE: Bill Fairservice, Oshawa Building Trades Council. The Oshawa District Building Trades Council hired the Fusion Energy Foundation to prepare a brief on their behalf. We have discovered that we are probably being used as a vehicle

to present their political point of view, and we have fired those people as of now. We would respectfully request that we be allowed to withdraw the brief, and with your indulgence, perhaps then we could submit one a little later on.

THE CHAIRMAN: Thank you, Mr. Fairservice. We will accept that. You can see the panel secretary, Mr. Timmermans, about arranging another time if you would like to present a brief, or if you would like to submit something in writing later.

MR. FAIRSERVICE: Thank you.

MR. PEACEKEEP: Murray Duncan, the second and third phase that you were referring to with respect to the occupational hazard, is that second and third phase of this hearing, or second and third phase of the regulatory process?

MR. DUNCAN: Second and third phase of the regulatory process.

THE CHAIRMAN: Mr. Grant?

MR. GRANT: I ask Doctor Prantl one question which Mr. Laird was dealing with, which may help everyone's understanding of the significance of this buffer zone. I would be grateful if you would correct me if I am wrong, but it doesn't really matter where the buffer zone is, as I understand

it, so long as at that point of the boundary the levels are acceptable. Is that not correct?

DR. PRANTL: That's correct. If you meet at that point the regulations that exist for that point, it does not matter where your boundary is, yes.

MR. GRANT: Thank you very much.

THE CHAIRMAN: Ellan Derow?

MS. DEROW: I have a point of clarification. I would like to ask a further question about the process. In dealing with occupational health, as someone interested in social community impact, I feel it's just not a factor within the factory walls concerned. Is the future review, your occupational health brief, to be done in public, or is this a privileged or private secret? Will the public be ever able to review occupational health?

MR. GRANT: I don't know the answer whether the public will ever be able to do that. But, my information is that in the past that matters involving health and safety of nuclear workers is a matter under exclusive regulatory authority under Atomic Energy Control Board. For my nickel, it seems like a good place to be, because I gather that nuclear workers have different kinds of occupational risks than

do general workers. If that's the case, then, seems to be appropriate place for it. We still have to go through a myriad of provincial regulations which deal with things like workers' safety in a general sense when we construct the building. We will do that.

MS. DEROW: But it's just to make a complete environmental impact review, it seems logical occupational health would be included, as far as I am concerned.

MR. GRANT: I think it is a question of how you interpret your function. I do not interpret your function to that narrow area. I think your function is to review the overall impact of what we propose to do and not concern yourselves with things of that nature.

MS. DEROW: But the overall impact is composed of different impacts. Taking these into consideration, we are able to make our conclusions.

THE CHAIRMAN: I think we could have a long debate on this. In the interest of time, can we-- are there any other questions from the panel?

MR. GRANT: Mr. Chairman, there is one thing I did forget to ask. Mrs. Lawson made a statement with respect to a measurement of thirty-two milorams on the street in Port Hope. My information is

that it's not a correct statement. I would be grateful if she, or any other person makes such a statement that they provide us with the authority for it and evidence of it, so that if it is true we will be able to deal with it adequately. My information on that particular issue is that the level was something of the order of 0.013 milligrams rather than thirty-two. I would not like that kind of statement to go unchallenged.

THE CHAIRMAN: Mrs. Lawson, perhaps you can consider that in your brief and discuss it then, in the interest of time. Can you answer it very quickly now?

MRS. LAWSON: I already did say Doctor Douglas Andrews of the Department of Chemical Engineering, University of Toronto measured that reading. He will be here to give a brief himself and to answer to that.

THE CHAIRMAN: Thank you. Any further questions? Thank you, Doctor Prantl. Our next speaker is Peggy Clark, a resident of Port Hope.

SOMEONE FROM THE AUDIENCE: She is not here.

THE CHAIRMAN: We will proceed with Mr. Warren Lowes, resident of Port Hope.

If any of you know Mrs. Clark, you

may ask her to see our panel secretary so that we may be able to reschedule her. Mr. Warren Lowes?

MR. LOWES: My name is Warren Lowes. I am afraid there is a mistake concerning my address. I do not live in Port Hope, I am a resident of Orono, Ontario. It's very close.

The phrase "environmental assessment", at the outset, is a term which can have a narrow interpretation or a wider meaning according to the views, interests or advantages sought by the individual observer. Thus, any development can be found to have various degrees of merit or demerit, both in its local setting and within the wider perimeters. In the interests of clarity, this brief will use the meaning as defined by Webster's New World Dictionary-College Edition. "All the conditions, circumstances and influences surrounding the development of an organism or group of organisms."

I am an organism; the people of Port Granby represent a group of organisms; the people in this room constitute a group of organisms; so do the children in our schools, the animals in our fields, and all of the people of other continents. In short, we are talking about the general well-being of all living things - rather a far reaching subject.

With these things in mind, a point of entry to this presentation can be gained if we focus attention first upon a passage from a pamphlet published by the Eldorado Nuclear Limited entitled "The Port Granby Plan", and circulated widely in this district.

Referring to the purpose of the refinery, the passage reads: "It will take the raw material - the uranium concentrates from the mines, mostly in Ontario - and further refines them to a form of uranium called UF6 uranium hexafluoride." The next paragraph goes on to say that this is not the form of uranium used in Canada and that UF6 is an export product only.

A preamble outlines the benefits of exporting finished products, leaving the inference that all export trade is desirable, potentially profitable and in the true interests of all Canadians - and to the people of the Port Granby area in particular.

As a citizen of Ontario and the Region of Durham, I would like to challenge this premise under two general headings. These will outline the negative affect emanating from the export of this product to foreign countries and list some deleterious aspects to the general well-being of the immediate area through environmental deterioration and

disruption.

THE EXTERNAL RAMIFICATIONS OF URANIUM PROLIFERATION

The problem of how to deal with radioactive materials has become a subject of paramount concern throughout the world. Systems of control must be brought into function at the mines, at the refineries, in nuclear fission power-plants, in the storage of radioactive wastes and in the process of transporting these materials to and from all parts of the industry. To deal with these hazards safely and reliably, would require a dedicated corps of hundreds of thousands of skilled experts, trustworthy and constantly alert - and for an indefinite period of time. A degree of social stability would be required which is unprecedented in past history, both here and abroad.

To list all the possibilities of mishap and intrigue in the limited time available here would be both wasteful and redundant. Men and women with more power of intellect than I, have been sounding a din of alarm to those who care to listen - people of stature such as Jacques Custeau, Barbara Ward, the noted anthropologist Margaret Mead, the renowned historian the late Arnold Toynbee, Sir Kelvin Spencer formerly chief scientist at the Ministry of Power in Britain, our own Professors Edwards and Knelmen, and

many, many others.

As a citizen of Canada, I am able to examine news releases from a good many sources and make my own observations. Hardly a day goes by that mention is not made of the adverse ramifications of the trade in uranium. We have had commercial dealings with faceless international promoters where millions of dollars in sales gratuities pass beneath the counter; our goodwill gesture toward India turned sour when some of the plutonium residue was fashioned into an atomic bomb; Canadian shipments to Germany found their way to Brazil; current scandal in Canada alleges our implication in cartel arrangements that tend to tarnish our trading image abroad and may cost us dearly at home.

But these are only the surface indications of the intrigue that goes on behind the scenes. Human frailties, carelessness and malevolent behaviour can penetrate and shatter the most iron-clad guarantees that any government can devise. Over the past decades we have had the opportunity to note these same problems in the narcotics traffic. In both instances we have a highly dangerous and highly profitable item which gets into the hands of an unscrupulous sector of the human race who choose to live dangerously and who have no compunction in

implicating whoever is convenient to their plans and interests. Like the narcotics trade, uranium must be rigidly controlled at the source. It cannot be shipped abroad like wheat, coal, fruit or sorghum molasses.

There is little point here in repeating the startling pronouncement that plutonium - 239 has a half-life of 24,000 years or that a lump of plutonium the size of a baseball is capable of causing an agonizing death to millions of people through cancer. Such information has almost become humdrum to all who read beyond the sports news and the advertising columns. The question that I would like to pose, then, is one of my moral and constitutional rights as a Canadian citizen. If I do not choose to live dangerously in this world of increasing insanity, does Eldorado Nuclear Limited or any other public agency, have the right to force me to contribute to this insanity? As Eldorado Nuclear Limited is a Crown corporation, I, in a sense, am a shareholder. I challenge their right to implicate me in the shipment of fissionable materials to foreign countries. I object out of respect to the future of coming generations, and I do so as a Senior Citizen who has had my share of living dangerously as a veteran of World War II.

DELETERIOUS EFFECTS ON THE LOCAL ENVIRONMENT

In order to gain public acceptance to the presence of a uranium refinery and waste disposal dump at Port Granby, publications of Eldorado Nuclear Limited make certain pivotal statements. The $80 million cost of the refinery will be taxable; about 150 steady staff employees will be required to operate the establishment; the land-parcel required amounts to 630 acres of farm land, some of which it is said can be kept in cultivation.

At the outset it can be argued that the expenditure of over $80 million of Canadian public funds by a Crown corporation in order to find a tax base is questionable logic. Then, it is not clear that the 150 employees are to be new staff or merely transferred from other parts of the same industry, say from Port Hope. But, on a scale of priorities, it becomes imminently clear that this 630 acres of farm land could serve this community, this country and the world more effectively if it were kept entirely in agriculture.

After a decade of data collecting and analysis, the Land Directorate of Environment Canada (another federal government agency) has published

preliminary results of an inventory for the agricultural sector. The salient facts from this study are: only approximately 10.3 percent of Canada's total land can support economically viable agriculture; only 5 percent of Canada's soils are free from severe physical limitations and can support good crop production; less than one half of one percent of Canada's land falls in class one category and one half of this is located in Ontario - mostly in the urbanizing areas of the south, adjacent to the Great Lakes.

Is this a logical place to locate a uranium foundry and dump? Was the uranium industry, in selecting this location, considering other economic, business and interests of convenience than its own?

The Province of Ontario has recently published a green paper entitled "Planning for Agriculture - Food Land Guidelines". Referring to enclaves such as the Port Granby district, it states (page 5): "The types of activity or land use permitted should only include agriculture, land uses compatible with agriculture, and activities directly related to agriculture and necessary to close proximity to farm operations." Then it goes on to describe such compatible uses as cold storage, grain drying facilities, animal husbandry services et caetera. Any-

one with imagination might expand this list to include plant nurseries, canning factories, poultry processing, biomass energy conversion systems et caetera et caetera.

Whether the entire 630 acres occupied by Eldorado Nuclear Limited is used as a refinery or only part of that parcel is not the point at issue. Possibly it serves more as a distraction.

If there is to be development in this area it is the agricultural industry that should be expanded. Agriculture is a labour intensive industry which creates jobs both for today and tomorrow. Agriculture will guarantee a food base for future generations. Over a period of time, agriculture can capture and convert more energy than can be derived from the limited supplies of uranium ore we have in reserve. The process is called photosynthesis and the resulting growth can be converted safely to other forms of energy. Consider alcohol, wood and methane fuels for example. In future, when uranium supplies have been exhausted, good farm land (unadulterated by radio-active wastes) will be capable of sustaining human life.

The establishment of an uranium plant in this locality will produce the opposite prospectus. By placing an industry of this kind into

the centre of an agricultural enclave you invite kindered industry and soon the entire agricultural climate has been destroyed. Farmers living close to plants such as this are subject to noise, traffic, dust and air pollution. Some farmers in this district have already had bad experiences with poisoned cattle and traffic aggravations since the temporary dump was located in their midst. Six cattle have died. Members of this panel might well ask themselves right here and now if they would choose to locate an agricultural operation beside a uranium refinery and dump. It is quite probable that many now located there will want to move to more pastoral scenes.

No! The entire concept circumvents all common sense. In a world where the population continues to double about every quarter century, does the preservation of farm land not rank number one in priority?

In still another category we might consider the loss to this country in energy flow since we are now purportedly approaching an energy crisis. Eldorado Nuclear Limited estimates that the total power requirements to run this proposed operation would amount to 315 million gallons of bunker C oil per year plus 10,000 kilowatts of electricity. Keeping in mind that

UF6 is itself a fuel and that it is to be exported in total, and that we are using up our own diminishing supplies of fossil fuels to prepare this substance for market, does it not appear that our accounting in energy units is somewhat faulty? The entire operation seems to represent a net loss to our country in terms of energy that could be better used to heat Canadian homes in 1980.

CONCLUDING STATEMENT:

The foregoing is a recital of the general reasons why I, as a Canadian and a citizen oppose the location of a uranium refinery and waste disposal facility at Port Granby. There are obviously many points concerning the matter of long and short-term radiation and its affect on the wildlife in the lake and its environs. There is also the matter of the well-being of the human complement who must live in the area and work in such an environment. Indeed, who must work at the plant.

In order to present these technical aspects adequately, it was hoped that the organization known as Save the Environment from Atomic Pollution (SEAP) could get funds to hire the necessary specialists. Up to the present moment this funding had been denied.

Again, as a citizen of this Canada,

which boasts of its tradition of democratic behaviour in social affairs, I feel that my rights have been thwarted.

In conclusion, then, allow me to hark back to the opening paragraph of this brief where the point was made that no environmental statement is complete if the term "environment" does not consider all aspects of the subject at hand - social, cultural and ecological. And this must be done in respect to time and the effects on future generations.

Thank you very much for your attention.

THE CHAIRMAN: Thank you, Mr. Lowes. Mr. Cheng?

MR. CHENG: Mr. Lowes, you mentioned that six head of cattle have died. Where are these cattle located?

MR. LOWES: This was around the area where the present dump is. Three of them were inside the perimeter of the dump, and three outside the perimeter.

MR. CHENG: That's the existing dump?

MR. LOWES: Yes.

MR. CHENG: Thank you.

THE CHAIRMAN: Ellan Derow?

MS. DEROW: I would like to ask you about traffic aggravations. Could you elaborate about the traffic aggravations?

MR. LOWES: Well, that would pertain possibly to the future as well as the past, and possibly more so in the future if we have a lot of construction going on there, and a lot of ore coming and going. In the past there have been trucks-- we have as an example one truck that was stalled on the highway in the winter time, and the driver needed some material to get himself out of the mess. He was stuck. He just took some of the slag that he was carrying and threw it under the wheels of the truck. Another rather interesting development of course is the toxic material. This possibly harks back to the point I was making before about human frailties. Not all of us are intellectuals, and we do not all have respect for these things that we should have. If we are going to get a staff to handle the proliferation of these wastes, possibly it's not humanly possible.

THE CHAIRMAN: Any other panel?

MR. LANG: I would like to explore the point you raised for just a moment with the Eldorado representatives. I think in your brief you

make a suggestion that a refinery of this kind, of this scale on such a large site opens up the possibility of related industries located by it, and which those effects it would lead to. Those are concerns of an environmental assessment. Given the fact of the refinery that produces uranium hexafluoride, which itself is a product that relates to other activities in the uranium cycle, could you tell me something about what other kinds of industries-- whether there is a link-- multiplier link of that kind to other industrial activities in the uranium cycle?

MR. GRANT: I do not think there would be any. I stand to be corrected by my technical fellows, but I do not think there is any link post UF6, because everything that happens to UF6 after our manufacturing the refining of it happens in countries other than Canada. So, there is nothing after the event at the present time unless Canada decides to do something further in the way of uranium enrichment, which I understand is unlikely. With respect to ancillary or support industries, I can ask Gordon Colbourn, who's the general manager of refining, and most familiar with the kind of materials that conceivably could be manufactured within the mills. But the bulk of them, according to my understanding,

are not likely to be manufactured in the area, because of the limited market that we would require.

Now, the question of peripheral development of an industrial nature was raised some time ago. As a matter of fact, it was by the Regional Municipality of Durham representative in discussions we had in a preliminary way. At which point in time we were asked whether or not if this industrial development, not on our site, mind you, but on the perimeter of our site were indicated to be desirable from a market point of view, would we consider doing things like oversizing our water intake. We said that naturally we would be prepared to consider such a thing. But, it isn't our idea that there would be peripheral development of an industrial nature in an area for a considerable period of time.

MR. CHENG: Have you done feasibility studies-- I am referring both to the kinds of industrial activities that is part of your uranium cycle, irrespective of Canada's policies. Have you done any studies of the feasibility of locating industries of that same kind on your property?

MR. GRANT: The 630 acres?

MR. CHENG: Yes.

MR. GRANT: No, because we do not

wish to have anything other than refinery within the exclusionary zone. It would not be appropriate to do such studies. It's interesting-- I do not think we have had in the many years of-- and Gordon Colbourne can comment on this-- the activity at Port Hope, I do not think we can demonstrate that there's been a mushrooming effect of the development of ancillary or support industries, other than of a minor nature. But, Gordon is the expert and he can certainly provide you with that information in detail.

MR. CHENG: Well, I would like to pursue that further, and I will do that when the Durham regional people come forward with their brief, My point was that it may very well be so, but conditions change in the future, and you do have a very large site, whereas the present plant does not have very much room for development of industries alongside of it.

MR. LOWES: If I might point out the present idea of a plant at Port Granby is because there was one previously at Port Hope.

THE CHAIRMAN: Any other questions of the panel?

MR. SHIKAZE: One comment. I would like to provide some assurance to Mr. Lowes' comment that he makes-- a question that he asked, is

this a logical place to locate a uranium refinery and dump, and was the industry in selecting this location considered economic business interests, so on? I would like to think that the panel is here to address just the kind of questions that you are asking. We will hear the various pieces of evidence that will come forth, and make its recommendation to the Minister accordingly. Hopefully in answer to the kind of question that you raise further on in your presentation, whether we would like to live there or not, perhaps we would have to be assured, and if circumstances were such that we could, then hopefully no member of the panel would deny themselves the opportunity to verify if the situation arose. What I am trying to do is provide you with some assurance that this panel in its deliberations will address the kind of questions that you raised. I have one small question. It relates to your opposition to the location of the refinery and waste disposal at Port Granby. Now, does this relate to the location at Port Granby, or to a refinery itself anywhere?

MR. LOWES: I do not understand the question.

MR. SHIKAZE: In your closing statement you oppose the location of a uranium refinery and waste disposal facility at Port Granby. Do you

oppose it anywhere else?

MR. LOWES: Yes. That's only my personal feeling, of course.

THE CHAIRMAN: Any questions from the audience or Eldorado?

MR. GRANT: I have two questions. You referred in your material, Mr. Lowes, to the SEAP group. Are you a member of that group?

MR. LOWES: Yes, I am.

MR. GRANT: You also referred to two accidents or incidents involving cattle. I think you mentioned with respect to the truck, some slag being thrown on the wheels of the truck. Do you know of those things from your own personal direct knowledge? Were you there with the truck?

MR. LOWES: No. These matters will be brought up by other people speaking at a later date.

MR. GRANT: You don't know of them of your personal knowledge?

MR. LOWES: I wasn't there.

THE CHAIRMAN: Any other questions from the floor?

Our next speaker is Professor Cyril Carter of Trent University.

PROFESSOR CARTER: Mr. Chairman, my name is Cyril Carter, Professor of Mathematics at Trent University, and I am also a commissioner on the Peterborough Utilities Commission.

Before I start reading my brief, perhaps a few words about my own experience in this field. I did do research on nuclear power with the United Kingdom Atomic Energy Authority from 1956 to 1962. I then did further research in related areas on electricity generation with the United Kingdom, the Central Electricity Generating Board for a further six years. Obviously fifteen years ago I was a believer in nuclear power, but I have modified my views to some extent over the years. I am not a rootant branch opponent of nuclear power, but I do believe there are so many questions-- we have to be very careful about it. What particularly disturbs me about the operations of Eldorado Nuclear is that they are producing uranium hexafluoride which can only be used to produce enriched uranium. It has no other use so far as I am aware of. There is general agreement, however thought, amongst nuclear engineers, that no matter what you might think about the absolute safety, the merits of nuclear power -- there is no question that the enriched light water tight reactors in the U.S. are certainly more dangerous

than the Canadian ones. I find it very surprising that a Crown Corporation wants to be involved in this field at all.

Now, the main point of my brief is perhaps a rather wide one. It's not directly concerned with the environmental impact on Port Granby. The concern I want to express here -- though I have a number of other ones -- the one I want to concentrate on is that this is quite likely a completely ill-conceived project, making a product for which there may well be no market. Eldorado is already stock piling the UF6 produced in its Port Hope plant, and yet it continues planning to make more of it. The immediate reason for Eldorado's problem is of course the Federal government restriction on exports, but there are also plenty of warning signals that nuclear power may be going into decline.

One of the three main nuclear companies in the U.S.A. General Atomic, has gone out of business due to a wave of order cancellations and deferrals. Most electric utilities there in the U.S. have surplus capacity, and they are caught in a financial bind. Rapidly escalating costs have forced them to raise their prices enormously. Many industries have responded to this by drastically cutting their

purchases of electricity, by implementing conservation measures and producing their own energy. Energy experts now say that any reasonable size industry or commercial enterprise can cut its energy costs by building total energy systems in which heat, electricity and hydraulic power are produced as part of a single package.

Last November, Professor Murgatroyd of Imperial College, London, gave a detailed argument along these lines to a symposium organized in Toronto by the Porter Royal Commission.

The evidence is mounting that electric utilities, particularly in the U.S.A., have underestimated the scope for conservation and improved energy management in reducing the demand for their increasingly expensive product. Almost every new energy study comes up with a lower future energy demand than the previous study, as we gradually realize how tremendous the scope for energy conservation really is.

If I might put another insertion into my brief, there is an energy consultant who told me, Anthony Lovins , who has worked for Science Council of Canada, amongst other bodies-- he wrote an article last October, '76 in which he estimated that U.S. energy consumption in the year 2000 will be about a

third higher than it is now. Well, by this July, that is only nine months later, on the basis of that later study, he's already revised that estimate. He now believes that U.S. energy consumption in the year 2000 is likely to be less than it is now. There will probably be a slight increase in the next few years, but then it will start going down again. Their whole range of studies-- I can quote you a number of the sources to back that view up.

Of course President Carter's new energy policy is going to intensify the trend. Solar water heaters, for example, are already marginally cost effective. Some people think they are already cost effective. The new U.S. tax credits are going to make them very attractive propositions indeed. There are a whole new measures that are being introduced, which are likely to reduce the demand for energy.

Now, nuclear power development is being delayed and reversed by another factor, apart from the increasing cost and conservation movement, and that is the government public belief that nuclear power may be dangerous. I personally have never been militantly anti nuclear, but I do believe that there are enough doubts and questions for us to be very cautious about a rapid expansion. I believe this is a

view which is spreading fairly rapidly through the whole world. The Utility Companies claim that nuclear power is their cheapest option. At a hearing a couple of years ago in Missouri which Barry Commoner testified-- one of the things he pointed out was that if instead of building this 1200 megawatt nuclear power plant that utility were to buy efficient air conditioners for all its customers it could save that same amount of power, about a third of the cost of building the power plant. It's reported that the commission that was-- he was testifying to, he was joking. I hope this panel does not think I am joking.

Now, to sum up, there are signs that nuclear power is more likely to decline than to expand, particularly perhaps in the U.S., where Eldorado hopes to find its main market.

I hope that during the main hearings that the panel, if it feels it's within its terms of reference, will ask Eldorado to justify why it thinks it can butt these trends and start increasing its cells when there are all the indications that nuclear power is going into decline. Thank you very much.

THE CHAIRMAN: Thank you, Professor Carter.

MR. SCOTT: I would like to ask Professor Carter whether he thinks that the trend and power-- or whether the other analyst about the Trent power consumption in Canada was likely to follow the same path as in the United States in terms of substitution of solar water heaters, and other more renewable energy sources for manufactured electricity in a country where at least our solar energy isn't as high as that of the United States?

PROFESSOR CARTER: Yes, I do. Maybe another thing I could have said about myself at the beginning was that I am currently engaged in establishing a chapter of the Solar Energy Society of Canada in Peterborough. I am not sure that your statement is strictly accurate that solar energy ressources in Canada are significantly less than they are in the United States. There are certainly some parts of Canada, particularly the prairies, where the winter solar intensities are quite high, and there is every prospect that solar energy will develop quite rapidly.

THE CHAIRMAN: Any further panel questions?

MR. BIRD: Mr. Chairman, I expect we will be hearing from Eldorado with respect to their

answering the questions that have been raised in terms of the basis on which their forecasts for demand are based?

The only one small question I have is that I did not quite get the name of the chap from Science Council. Has he published this Science Council report, or a report in the journal? What was the publication that you mentioned?

PROFESSOR CARTER: The publication I referred to was in the journal Foreign Affairs. The first article was in October, 1976 issue of Foreign Affairs. I understand that all this material has now been published in a book. But, as far as I can find out, it's not yet available in Canada.

MR. BIRD: What was his name again?

PROFESSOR CARTER: Lovins.

MR. LANG: Perhaps I can add something to what Peter said about the expectation that Eldorado will respond to. I would like to see a response-- perhaps not now, but at a later time when you have a larger opportunity to do so, the two assumptions that I see that need to be explained. One is that-- I guess you are assuming-- Eldorado is assuming that nuclear market, from your point of view,

will expand rather than decline. That's the message I got from your slide presentation last night. Perhaps you could defend that further-- explain it further. Also I think you are assuming that the export limitations will be lifted and you will not continue to stockpile more and more canisters of your product out there at your plant. In both cases I think we might hear further from you on that?

THE CHAIRMAN: Mr. Grant?

MR. GRANT: If the embargo does not get lifted, or the safeguard does not get solved, we are going to use the eighty million to pay for the stuff we have lying around in the yard out there. We hash this-- the business oriented organization have to expect that somehow we might be able to dispose of our product. We are not privy to any private information as to how those negotiations are going with various nations of the world, except that we fully anticipate, and the reason will prevail, and some solution will be found as has in the past. With respect to the provision of the supporting data on our calculation of the future market, I would like to find out what we have before agreeing that we can give you the information. I would not want to go out and have to do a whole new study, because I do not think it's an

environmental concern as such. But, to the extent to information, the graphs we showed you last night, we will certainly be glad to give it to you. We hope we are right on that score, because that from a business point of view, it's fundamental to our decision to proceed with this facility.

MR. LANG: From my point of view, at least the need for a project is definitely part of an environmental assessment. The need for this project seems to be based in Canada's export policy. We can't question that too far-- I don't know if-- I will at least, as far as I am concerned. But, the need for your product is based on projections that you have made of the market, as well as that policy. To me it's a legitimate consideration.

THE CHAIRMAN: I think it's becoming obvious as this process develops across the country that this has been a legitimate concern of panels. They have made comment on it in other reports, and do intend to in future ones. At the same time I think you indicated you would reserve judgment on the information until you found out what is available. I am sure that's legitimate also. If you could provide additional market information, this would be helpful to us, because somewhere along the way-- obviously if

the panel concludes there is no need for the refinery, it does eliminate a lot of other problems.

MR. GRANT: In fact, with respect, I do not think it does. If you come to the conclusion that we do not need it -- as I understand your responsibilities, you're advised to provide your comments as to whether or not if this were built it would cause any harmful impact on the environment. If you make that statement, that it would cause negligible harmful impact on the environment, but that you do not think it's needed-- you are perfectly entitled to make that statement. But, the Minister of the Environment - the responsible Minister is entitled to say, well, we are the ones that make the decision on the financiality. I do not mean to be disrespectful on that, but I think it's a point ---

THE CHAIRMAN: You are correct. As I indicated, we will be making recommendations and the decision-makers consider our report as one of the factors in their decision. I think that's understood. As I said, if you can provide additional information, I think it would be helpful to us, particularly the gray area which I think we are in between, in the sense that it looks like you want to build something and it may cause some impact, and how much benefit are we

getting from the cost of that impact.

MR. GRANT: Mr. Chairman, I have one question for the professor. Professor Carter, I was not clear on what you said as to whether or not the reference which you've made to reduction in demand for energy was in fact a reduction of projected reduction in demand, or projection that the demand will be supplied in different ways in the future, therefore, the demand on the existing-- or present modes are providing that energy will be produced. Are you saying we are going to use less energy in the future, or are you saying we use more, or the same, but provided in different ways?

PROFESSOR CARTER: I am saying in fact both of those things. Total demand for energy is likely to increase over the next few years, but then start going down. As I said, I can give you a whole number of authorities for that judgment. There is also a general feeling that the distribution of energy resources will also change that particularly more of it-- considerably more of it is going to be supplied by solar energy over the next fifty years, unless by fossil fuels. We don't really need nuclear power at all, according to many estimates.

MR. GRANT: Thank you.

THE CHAIRMAN: Before we proceed with additional questioning, there is a car with its lights on in the parking lot again. The licence number is FDA-876.

MR. SCOTT: In following up something that Professor Carter said about the stock-piling, I would like you to-- I would like to address a technical question to Eldorado. In the event that the policy didn't change, how tough is it to change uranium hexafluoride back to uranium dioxide? I am not being facitious about this at all, because we are committed-- or semi-committed in this country to uranium dioxide through nuclear reactors. It would seem to me that any uranium hexafluoride that was on hand at the time should not sit there waiting. It might well be reconverted.

MR. GRANT: One thing we should not overlook is that we are free to sell it to the United States for use in the United States. The problem comes where it is going to the United States or France to be enriched in those places, and then for further transmittal to countries in respect of which we do not have appropriate safeguard. But, the United States, although it has a substantial amount of its own uranium, is also a purchaser of refined Canadian

uranium. I am just advised by Mr. Frost that we have on a small scale in the past gone the reverse process. I think Stan can provide more information on that than I can. Perhaps I can ask him to briefly deal with that aspect of your question.

THE CHAIRMAN: Mr. Frost?

MR. FROST: Dan Frost, Eldorado. In fact that is the basis of the whole American light water reactor program, because they take UF6 which has been enriched, the fuel fabricators convert that to UO2 and convert into fabricated fuel. We have done some of this on a small scale for development fuel for CRNL and white shell. The technology exists-- it's quite possible. We are not geared up to do it on a large scale at the moment, but we, I suppose if necessary, could.

MR. SCOTT: Thank you.

THE CHAIRMAN: Mr. Frost, for the benefit of anyone who doesn't know, could you explain CRNL?

MR. FROST: Chalk River Nuclear Laboratories.

THE CHAIRMAN: Thank you. Murray Duncan?

MR. DUNCAN: One point possibly

in clarification of this business of energy demand. If you can mention whether or not we are relating to a per capita demand, or are we talking about total energy? This did not appear to be clear to me.

PROFESSOR CARTER: We are talking about total energy here.

MR. DUNCAN: So we have to involve consideration of--

PROFESSOR CARTER: Yes. That's correct.

THE CHAIRMAN: Mr. Cheng?

MR. CHENG: While we are still on the subject of supply and demand, assuming demand can hold true, and sometimes way down in the future you would have to look for further expansion of the plant, are there plans in attention that the plan you are proposing would accommodate further expansion capacity? Maybe we are a little away from the subject we are discussing.

MR. GRANT: Yes, we would accommodate future expansion, but once again, subject to regulatory approvals. It's not our present intention-- present estimate of the market. It does not indicate that we would be expanding within the foreseeable future, by which I mean a considerable

period of time. Remember that we will continue to manufacture uranium hexafluoride at Port Hope as well, and we would just be manufacturing that at Port Granby, we hope. But, there is capacity for expansion, although we do not see the need for it immediately.

THE CHAIRMAN: I have one question, Professor Carter. You mentioned the possibility of the market not being there. Perhaps you could tell us, if the market was there and the plant was go ahead as proposed, would you have any comment on the construction of a plant at the proposed refinery-- proposed site?

PROFESSOR CARTER: Whether Port Granby is a suitable site?

THE CHAIRMAN: Yes.

PROFESSOR CARTER: Well, I can't give you any expert opinion on that. I don't know the site, and I don't live-- you know, I live in Peterborough, which is some miles away from here. But purely on a personal basis, I would tend to agree with the last speaker that it seems terrible to take up agricultural land with a proposal like this, because agricultural land is something before very long we are going to be desperately short of in this province.

THE CHAIRMAN: Thank you. Are

there any further questions from the floor?

MR. GRANT: Would it bother you, Professor Carter, to know that with respect to the agricultural land a large part of it was used to grow tobacco?

PROFESSOR CARTER: Well, I certainly would not approve of that.

THE CHAIRMAN: Mrs. Lawson?

MRS. LAWSON: Pat Lawson. I just wonder why it is that our government does not permit the enrichment of uranium.

MR. GRANT: Not so much the government does not permit it, as far as I know. But, we don't have the processes for it. It is a very sophisticated process. In fact, the French and the Americans regard that process, in proprietary sense, very jealous. Of course our reactors in Canada do not use enriched uranium, as you very well know.

MR. LANG: At the same time neither do our reactors use uranium hexafluoride.

MR. GRANT: I beg your pardon?

MR. LANG: At the same time our reactors don't use uranium hexafluoride.

MR. GRANT: No, that's true.

THE CHAIRMAN: Any further

questions?

MR. BENNETT: My name is John Bennett. I am from Toronto. I would like one clarification, and one question. Doctor Scott, in terms of solar heating in northern climbs, as you leave the equator region and proceed north, solar heating becomes more economically viable and that the cost of heating is greater as you go north. Thereby every saving you make by using solar power is greater, and therefore it's more economically viable to heat homes in Canada than it is in the Southern United States, because they do not have to spend the fuel costs that we are already spending. Secondly, I would like Eldorado Nuclear-- in the event they cannot find the market and they cannot export uranium hexafluoride, will we have to go through this process again when they ask us can we build a plant to process it back again into uranium dioxide?

THE CHAIRMAN: Mr. Grant?

MR. GRANT: I suppose we might have to do that, but that's a long time away, I hope.

THE CHAIRMAN: Thank you. Any further questions? If not, we have a few minutes for anyone who would like to make a statement. As I indicated last night, one who isn't scheduled, this

might be an appropriate time for a brief statement. If no one wishes to speak, I think we can recess until seven o'clock tonight. Thank you.

--- ADJOURNED AT 5:20 P.M.

September 28th, 1977.

--- Upon commencing at 7:00 p.m.

THE CHAIRMAN: Good evening ladies and gentlemen. My name is John Klenavic. For those of you who have been here at our earlier sessions, you will have to hear my speech again, but I am trying to make it shorter as each session comes. I am the Chairman of the Environmental Assessment Panel set up to examine Eldorado's proposed Grandby project. I would like to briefly point out the purpose of our hearing is to prepare a report for the Minister of the Environment on the potential environmental impact of the project that is proposed.

Our report is rather unlimited in scope in terms of what we would like to put in it and what we might put in it, if we so decide. I would like to make that clear because from remarks that came up after some of our earlier sessions it appears that some people felt that our scope might be somewhat limited and I would like to point out that it is not limited in terms of consideration of what we wish to put in it.

I would like to quickly cover what we are going to do in the first phase of the hearings which cover this week, and then next week at Newcastle. The conduct of the hearings is based on our previous experience in other panels across Canada, and it seems to work best to conduct these hearings in

two phases, of which this is the first phase. This first phase has the main purposes: To clarify points that are not understood, to identify possible deficiencies in the Environmental Impact Statement to permit the panel to make decisions on which deficiencies require rectification by the proponent and, finally, to identify concerns that the public may have about this project.

This phase will lead the panel, at its conclusion, to determine deficiencies in the Environmental Impact Statement or E.I.S., and based on this phase of the hearings, to identify specific issues which we would discuss in phase 2, after the deficiencies have been corrected. This process involves those people that are interested in a specific issue and the technical experts who may be needed to discuss these issues to be present for that particular subject. These issues will be scheduled by specific days. We think that this has certain advantages in that those who are interested in specific issues will be able to turn up and participate in those discussions without necessarily having to spend a lengthy time at hearings on listening to subject matter that may not be of direct interest to them.

I might also mention that we have asked technical agencies within the federal and provincial government to review the E.I.S. and to provide these reviews to the panel, and these reviews are being made available to the public as we receive them.

I hope this evening, as we have a somewhat crowded schedule, that the Intervenors will be able to limit their remarks to fifteen minutes -- even less would not raise any serious objections. Followed by the presentation the panel and the public may ask questions to clarify points in the presentation.

I would like to emphasize that the questions should be directed to clarifying what the speakers have said, rather than getting into presenting all kinds of positions or other concerns. In the second phase of our hearings we get into that, once we clearly understand what the concerns, deficiencies and so on are in this first phase.

Another point that I would like to make is that if time does permit us at the end, as I have asked in earlier hearings, other persons who are now in the audience may wish to make brief statements and are welcome to do so if time is available at the end of our hearings. They might register during the coffee break or at some such time with Mr. Brian Timmermans on a first come first serve basis.

I would also like to point out that we, as a panel, are receiving letters from various individuals and groups. These are quite welcome, and if anyone would rather send us a letter than make a presentation in public, this is perfectly acceptable. Copies of these letters are available to anyone who is interested in them, from Mr. Timmermans.

John Klenavic

Our hearing tonight is scheduled from approximately 7:00 p.m. to 10:00 p.m., and we continue again tomorrow in this hotel at 1:30 to 5:00 and from 7:00 to 10:00, and on Tuesday evening in Newcastle, Town Hall, starting at 7:00 o'clock and repeating for Wednesday and Thursday.

The only thing I would like to do now that is rather important, too, is to introduce the members of our panel. Their biographies are available in the press kit. On my right is Ellan Derow; to her right is Clement Cheng; beside him is Peter Bird; and on the end is Reg Lang. Starting from the far end on my left is Kim Shikaze; Murray Duncan; David Scott. The gentleman to my immediate left is Michael Warder, the Secretary of our panel. When he is not here during the normal daylight operations, you may find him in Room 107, if you have any questions or administrative problems.

We do publish a schedule of speakers. It does seem to change faster than we can publish it, but you can make these changes through Michael Warder or Brian Timmerman.

At the table down to the right we have two advisors: Erik Miller and Gerry Grisak. Beside them are Brian Timmermans and Pat Donovan, who, as I mentioned, are with Michael Warder in Room 107 of this hotel, if you have any activities that you wish to discuss

with them.

The green table to the front right is for the Intervenors, in succession, who are scheduled for the evening. On the front left we have the representatives from Eldorado. At the table to the left we have the representatives from the media.

We have had a request for one speaker who has another commitment to make a brief statement this evening. We had scheduled our initial Intervenor and if you do not mind a delay of ten minutes, Mr. Laird, would you like to proceed.

MR. LAIRD: Yes, Mr. Chairman. I apologize to the Province of Ontario. This will not take very long.

Early today we dealt with the question of the death of cattle on or near the Eldorado site. I thought that while it was fresh in the panel's mind, that they might like to hear from one of the farmers whose cattle did die. He did not prepare a speech. He has to go off to an auction sale, so this is the reason I am asking that he speak first. Bud Elliot is the individual who had cattle die, and he would probably prefer to respond to your questions, if you have any, but he will state briefly what did happen.

MR. ELLIOT: I just hope these questions are quick and simple. What questions do you have?

BY THE CHAIRMAN: I think we should start off with you telling us your experience, and this would probably prompt questions from us.

MR. ELLIOT: The animals just simply broke through a hole in the fence and they died as a result of nitric poisoning. It is quite simple.

THE CHAIRMAN: Can you indicate when this occurred and how many animals you are talking about?

MR. ELLIOT: Six animals. I can't remember the date. It is 1974 or 73.

THE CHAIRMAN: Were there tests conducted on them to determine the cause of death?

MR. ELLIOT: Yes.

BY THE CHAIRMAN: Are these reports available?

MR. ELLIOT: Yes, they are available. I do not have them with me, but they are available, if you would like to see them.

THE CHAIRMAN: Where did this occur? I feel like a coroner.

MR. ELLIOT: On the dump site, as it is now.

THE CHAIRMAN: This is the dump site at the proposed Port Granby site?

MR. ELLIOT: Yes.

THE CHAIRMAN: Any questions from the panel?

MR. LANG: Were you compensated for the loss by Eldorado?

MR. ELLIOT: Yes.

MR. CHENG: How long had the cattle been grazing on the lot? Were they there all the time?

MR. ELLIOT: Not on the dump site all the time. But they were adjacent to the dump site, and had been since they established the dump site there.

MR. CHENG: How close when you say "adjacent"?

MR. ELLIOT: Just immediately over the fence.

MR. BIRD: To try to understand this a little bit better, there was the break in the fence and the cattle went through and grazed on the land and died within hours? Days? Do this once? Were they grazing there for a week before you found that they had broken through the fence?

MR. ELLIOT: No, they had just got in sometime during the previous evening, and I noticed them in the morning.

MR. BIRD: How long did it take before they died?

MR. ELLIOT: Just a matter of hours. Some of them were dead that morning. I do not know at what time they actually got in to the dump.

It could have been one in the morning. It could have been twelve. It could have been five. It wouldn't be five. It could have been six, seven or eight the previous evening. Some of them were dead in the morning when I was looking for them at about six o'clock.

MR. BIRD: So it was certainly a case of acute poisoning right then and there?

MR. ELLIOT: Yes.

MR. BIRD: You say it was analyzed and called nitric poisoning?

MR. ELLIOT: Yes.

MR. BIRD: Someone asked you whether the report is available. Would you produce a copy of the report for us?

MR. ELLIOT: Yes.

MR. SHIKAZE: Are these dairy cattle or beef cattle?

MR. ELLIOT: Dairy cattle.

MR. SHIKAZE: Then I gather you have a herd that grazes adjacent to the property or had had for some period of time before the accident or perhaps even subsequent. Have there been other problems associated with that dairy herd in terms of milk or anything else such as in terms of productivity?

MR. ELLIOT: No, I no longer have a herd of dairy cattle. I didn't notice anything after that or anything that lingered from it. The

animals that got it seemed to die. The ones that lived did not seem to get it.

MR. SHIKAZE: Aside from that incident, have you had any other problems that you associated to the fact that they were grazing next to the dump?

MR. ELLIOT: Before that there was another problem, yes. It was of a different nature. There were two animals that died at that time.

Does that answer your questions, sir?

MR. BIRD: I am afraid it raises more questions than it answers. You now mentioned that there were two other animals that died at an earlier stage

MR. ELLIOT: At a much earlier stage.

MR. BIRD: Were they analyzed, as well, and what was the cause of their death?

MR. ELLIOT: They were analyzed, and it was arsenic poisoning.

MR. BIRD: They did not break through. They were grazing next door, but they did not in fact stray onto the dump property?

MR. ELLIOT: Not that particular two. They obtained it from the beach area.

MR. BIRD: How do you know that?

MR. ELLIOT: Because this is

where the samples were taken from at the time. There was no hole in the fence at that time.

MR. BIRD: Samples of water? What were the samples?

MR. ELLIOT: Samples of water and soil material.

MR. BIRD: How many cattle did you have at that stage?

MR. ELLIOT: I do not know how many cattle I had at that stage. There were the two in question that died.

MR. BIRD: Were any other cattle found to have any ill effects?

MR. ELLIOT: No.

THE CHAIRMAN: In what time frame are you talking about with regard to the earlier cattle?

MR. ELLIOT: This would be back during the early stages of the dump. Perhaps somebody else could answer that better than I can. It was in the fifties some time. It was the fifties or maybe early sixties.

MR. CHAIRMAN: Mr. Brown, do you want to ask a question?

MR. BROWN: Yes. The only question that came to my mind was -- and perhaps it may more properly be directed at Eldorado -- just what has the Company done to ensure that cattle cannot break through

the perimeter of the fence or, for that matter, humans cannot break through?

THE CHAIRMAN: I was going to ask Eldorado if they wanted to make a statement.

MR. GRANT: I have a number of things to say, Mr. Chairman.

First of all, Mr. Elliot, is it true that this incident with respect to the six cattle occurred in 1974?

MR. ELLIOT: I am not certain of the date. I would have to get the report and look it up.

MR. GRANT: That is about three years ago?

MR. ELLIOT: Yes, somewhere in there.

MR. GRANT: Is it true that you have sold your farm to Eldorado?

MR. ELLIOT: Yes.

MR. GRANT: So you no longer now carry on any farm activity in the area of the existing waste disposal area?

MR. ELLIOT: Nothing to do with livestock.

MR. GRANT: Do you carry on any farming operations there at the present time, other than as a lessee of Eldorado?

MR. ELLIOT: One field of corn.

MR. GRANT: You do not now have any cattle there?

MR. ELLIOT: No.

MR. GRANT: With respect to this incident back in 1955 or 1960, you mentioned that it was due to arsenic. I gather from what you said that it was because the cattle got down on the beach; did you say that?

MR. ELLIOT: Yes.

MR. GRANT: How did they acquire the arsenic on the beach?

MR. ELLIOT: I presume it was from drinking the water.

MR. GRANT: Drinking the water on the beach?

MR. ELLIOT: Drinking the run-off from the dump site across from the beach.

MR. GRANT: You are operating a corn field in the area. Can you explain to the panel and to the other members and people who are here what changes have taken place in the way of fencing around the existing dump site since your cattle were killed in 1974?

MR. ELLIOT: There has been a considerable amount of fencing done; there is no question about that. Eldorado could probably describe that far

better than I can. All I know is that there has been a tremendous difference in the fencing.

MR. GRANT: Have you actually seen the fencing, though, Mr. Elliot?

MR. ELLIOT: Yes.

MR. GRANT: Do you think a cow could go through one of the present fences?

MR. ELLIOT: I doubt very much -- not to the dump site.

MR. GRANT: You said the animals broke through the fence back in 1974. Did you mean that, or did you mean that they walked through a hole that was already there?

MR. ELLIOT: The hole was already there. I am quite certain of that.

THE CHAIRMAN: I wonder if there is anyone with you that might be able to describe the fencing as it exists now, for the interest of myself and perhaps the others present.

MR. GRANT: Yes, I think some have actually seen the fencing, but we can describe it verbally, if you wish.

MR. FROST: In the beach area at the foot of the bluffs there is barbed wire -- probably four strands on T rail in the portions of the site where it would be possible for people or animals to climb to the top of the hill. At the top of the bluffs there

is a six foot chain link fence with three strands of barbed wire at the top. It is standard security fencing.

THE CHAIRMAN: Thank you. Thank you Mr. Elliot for your testimony. I understand you are going to an auction now.

MR. ELLIOT: Yes.

MR. CHAIRMAN: You might find that more interesting than this.

We will now hear from our first scheduled Intervenor, the Province of Ontario. Mr. Dennis Brown.

MR. BROWN: Thank you, Mr. Chairman.

In a few moments I will be introducing to you, the panel and the people here this evening, Mrs. Beverley Thorpe, the Co-ordinator of the brief before you this evening. I might say for those people who are here for the first time and have not acquired a copy of the Provinces brief, it has a blue cover. I should emphasize that the brief is the brief of the Province of Ontario. It is not only the Ministry of the Environment that is involved, but there are many other ministries and Mrs. Thorpe will allude to them. We speak this evening and shall be speaking throughout these proceedings on behalf of the Province. Also for the benefit of the people here this evening, I may indicate to you that there will be people here from the province for,

I expect, most of these proceedings. You may not see the same faces at all times, but to the rear and behind me, there are two people associated with me who can be contacted if you have any questions. They are Mrs. Goldburg and Mr. Fitzpatrick. They are people who can assist you, along with anybody else who may be giving evidence this evening. Feel free to speak to them and ask them any questions and, hopefully, we can give you the answers or we can find out the answers for you.

We are here for, I believe, about four reasons. The first is that there are, as you are probably aware, a number of provincial statutes which set out regulatory provisions and, undoubtedly, we have a responsibility to be here to monitor these proceedings and, as it were, satisfy ourselves that the proponent proposes to conform and will conform with the relevant statutes. The statutes I am thinking of are, for example, the Environmental Assessment Act and the Environmental Protection Act and the Ontario Water Resources Act, among a number of other acts. Secondly, it is our intended aim to assess this panel to whatever extent we can. In that regard we have at our disposal a lot of expertise, and we think some very good people who we think can assist the panel. Certainly, we have a responsibility to the people of this province and we feel that as a result we have an obligation to be here and an obligation to them, and as we have heard, there has been a suggestion that because of a

lack of funds some people feel that they have not had the opportunity to acquire some independent expertise on which to test Eldorado and its experts. I think they should feel free, in the absence of obtaining a grant in the next little while, to draw upon the resources of the ministry, who is here this evening, and will be here, and they should feel free to approach anybody associated with them, ask those questions and try to obtain the information that they wish. We will do our utmost to assist you.

I think it should also be pointed out that these proceedings, as far as the individuals who are here and the information which they give and the information they take back to their ministries does not stop. They are in touch on a regular basis and will be in touch on a regular basis with most of their associates -- Associates that have contributed in no small way to this brief. That information, and the proceedings here, are certainly being passed on to the respective ministers and to the people that have an interest in the outcome of these proceedings as a result of the ministry with which they are associated with.

That is all I might say as a matter of preliminary. I would like to introduce to you Mrs. Thorpe, who will give you a brief breakdown of the report that is before you this evening.

MRS. BEVERLEY THORPE: Thank you, Dennis. I think, first of all, I will give you a little more information about who I am so that you will know why I am here. I am an Environmental Planner in the Environmental Assessment Section, environmental approvals branch of the Ministry of the Environment. Our responsibility is to administer the Environmental Assessment Act. Because of the Canada-Ontario Agreement on environmental quality, the Ministry of the Environment co-operates with the Federal Ministry of Fisheries and Environment on environmental assessment matters. So we are here as sort of the counter-parts for the Federal Ministry of Fisheries and Environment. I am also here as the Provincial Co-ordinator of the brief that has been prepared by the province and as a member of the steering committee which the panel set up to help develop the guide lines issued to Eldorado and to deal with the interpretation of those guidelines before the panel.

I think that it is appropriate that I tell you which ministries in the provincial government were contributors or at least reviewed the submission by Eldorado and some contributed to the review. I will list them in alphabetical order to avoid any problems. The ministry of agriculture and food, community and social services, culture and recreation, energy, environment, health, housing, industry and tourism, labour, natural resources, transportation and communications

and the ministry of treasury, economics and inter-governmental affairs.

As you can probably appreciate from that list of ministries, we have tried to address all of the concerns that we might have with respect to Eldorado's submission, and to try to cover all of the areas that Eldorado has raised.

I would also like to point out that the submission that we have prepared for this hearing is specifically addressing the deficiencies, data gaps and errors in the report. It is not a position or policy on Eldorado's proposal at this time, and that we are requesting that our comments be addressed and the additional information that Eldorado provides will be used as a basis, together with the documentation, to reach a decision on the merits of the proposal.

The submission is organized to follow the number and schemes set out in the guidelines issued by the panel found in Chapter 7 of Eldorado's documents. I would like to reiterate what Mr. Brown has said, that the technical staff of the province will be available tonight to try to clarify specific points. We are also scheduled at this time to be here at 1:30 on October 5th. We will address additional questions at that time that may be raised and bring forward any answers that we cannot give you this evening.

For additional information pur-

poses, we have prepared copies of an information package, with provincial statutes, some of the standards, objectives, guidelines, whatever, information on monitoring activities that exist at the Eldorado plant that the various provincial ministries have carried out. We have given copies of that to the panel and we will be happy to provide additional copies to anyone who requests them.

I would like to briefly touch on the major points in the submission. There are additional comments and other aspects which I am not going to touch on, in the interest of brevity, but I would ask that you do look at those comments in the brief, as well. They are not any less important, but tend to be of a more technical nature than I would like to touch on now.

The first aspect which we have in Section 1, talking about rationale for the project, we felt that in evaluating, from a provincial standpoint, the net benefits of the Eldorado proposal, we require additional information on the present and projected market that Eldorado is competing in. Some of these questions are similar to those asked this afternoon, so it is very possible that Eldorado's response to those questions will also address on some of our concerns.

We have also looked at the analysis of alternative sites, Appendix 1 and 2 of Eldorado's submission. We found that it had major deficiencies in both the evaluation of environmental

impact and the method used for houses. We feel that should the Port Granby site prove not to be acceptable for some reason, there would be a need to readdress these deficiencies before an alternative site selection could be carried out.

With respect to the project description, we found this inadequate in several areas to allow an adequate projection or prediction of the impact.

Under the section plant description, we indicate that we recognize there is a detailed approval stage to follow, and that much of the detailed information is more appropriately prepared at that time, but we do feel that we need more information on omissions and things like that so that we can evaluate impact. We would very much like the information referred to this afternoon by Doctor Bird and we are questioning not what goes on in the plant itself, but what comes out of the plant.

With respect to the labour issue, there are several areas we address in the brief we feel have been inadequately or incorrectly evaluated and there is some additional information required there for our purposes.

There is an area that we touched on in several places throughout the brief, and it is sort of a general problem, and that is the way accidental

spills or releases in emergency situations are dealt with, both during the transport of materials and during the plant operation. We feel this area is an important one, with potentially severe environmental impact, that should be evaluated at this stage and there are specific comments in the report that should be addressed.

Another area in which there is obviously some concern on many peoples part, and I think Eldorado has recognized this, and this is in the waste disposal question. We are very much gratified that Eldorado has recognized that this is a difficult technical area and something that is going to require additional discussions both in the public form and probably on a technical level as well.

Technical experts in the province have reviewed the proposal and there are questions outstanding that we would like addressed as early as possible. I would also like to mention that the experts in the province who have looked at this would like to meet with Eldorado's technical people to try to discuss some of these questions. There may be some misunderstanding that could be cleared up because it is such a difficult technical area that it is probably going to require some conversations among technical experts.

We have addressed comments, as well, on air, water biona, and things in those sections that have not been dealt with adequately. I would like

to direct the panel, Eldorado and other interested parties to the brief as to specific points in that area.

Finally, an area which is a serious deficiency from our point of view is the treatment of the land use. The evaluation of impact on agriculture has serious deficiencies that we feel must be addressed and are particularly important to the evaluation of Port Granby as a site.

With that brief overview I would like to turn over the proceedings to any questions. I have with me a lot of the technical staff who prepared the review. Not all of us are here, but most of us are here, and we would like to try and answer as many questions as possible tonight. You will appreciate that there are some that we cannot answer. We would like to table those and ensure that answers will be forthcoming.

MR. LANG: I only had a chance to read the brief briefly, and I would like to ask a couple of questions which may already be answered in there. First of all, it is more of a procedural point, but your piece of paper that set out the monitoring programmes, would it be possible for you to provide us with a summary of the results of that monitoring?

MRS. THORPE: Yes, we can provide copies of all of that monitoring for you.

MR. LANG: I do not want copies of all the material, just a summary of the results in order

to determine where, if any, there were contraventions of standards.

MRS THORPE: Yes, we will provide that information to you.

MR. LANG: I heard you say, when you referred to the list of ministries that were involved in this process, the ministry of energy.

MRS. THORPE: That is correct.

MR. LANG: Yet, I did not see any mention in your brief of any energy related issues. Did the ministry of energy examine or comment on the large energy use that is supplied by this refinery?

MRS. THORPE: No, they did not make any comments at all.

MR. LANG: The last question I have is that in the section of your brief that talks about zoning official plans, is it correct that the regional plan is still a draft document -- it has not been approved?

MRS. THORPE: I believe that is correct. I would like the representative of the ministry of housing to confirm that.

MRS. REBECCA LUK: The regional official plan has been submitted to the minister since August of last year. Since that time, the plan has been circulated and circulation to the various ministries has been completed. At this time we are at the stage of finalizing the plan with the regional planning staff.

The plan that is about to be approved in the very near future has a number of modifications to it. The Port Granby site is designated as a special study area in the regional plan. That means the special study has to be done before the proper language can be determined. It would have to be a separate amendment to the plan -- to the regional plan -- once the regional plan is approved.

MR. LANG: I would like to ask a couple of questions about that to get it straight in my own mind. We have a copy of the draft official plan that was submitted to the minister for approval. Are any of the modifications that you are talking about that came about as a result of this circulation through the system, do any of these modifications affect the Port Granby site?

MRS. LUK: No; actually, the Port Granby site is not a major issue in the regular official plan at this point. The official plans branch were not even aware of the Eldorado proposal until recently, when we got involved through the Environmental Assessment Statement.

MR. LANG: Is it true, then, that the plan we have would be accurate. It has not been changed as a result of the internal review?

MRS. LUK: No. As it stands at the moment, it is a special study area. Special study area number 12.

MR. LANG: There are a couple of things I didn't understand about the recommendation that is made on page 39 of the brief. Do you suggest there that a regional plan amendment would have to be made. I guess you mean after, after the plan is approved?

MRS LUK: Yes.

MR. LANG: As long as it is a draft, there would be no amendment.

MRS. LUK: The plan is not called a draft plan anymore, once it is submitted to the minister of housing for approval. It is called a proposed plan. This is just a minor technical detail.

MR. LANG: It is still not an official document until it is approved?

MRS. LUK: No, it is not.

MR. LANG: To what extent does a crown corporation such as Eldorado have to conform to a local plan. It is my understanding that we do not have to conform.

MRS. LUK: Perhaps I can direct that question to Mr. Brown to answer.

MR. BROWN: I am looking at Mr. Grant now. I thought that last night it was indicated that there were a number of municipal and provincial agencies that had guidelines and requirements and the corporation was willing to do what it had to do in order to conform with whatever statutes, regulations or schedules

thereunder. Am I wrong?

MR. GRANT: I do not think we said quite that. While we did say that in matters such as environmental controls, matters of safety, etcetera, we would follow the normal processes. We have not said -- and we have taken quite an opposite position -- that Eldorado, being a federal agency, is obliged to comply with things such as local municipal zoning or by-law requirements.

MR. LANG: I know that trying to pin down lawyers is like trying to nail jelly against the wall, but with two of you here, I would like to establish --

MR. GRANT: That is not fair. It only applies to social scientists. At least with lawyers you can understand.

MR. LANG: I would like to try to establish this in two parts. Is it true that federal agencies are not required to conform to local official plans?

MR. GRANT: I think the answer to that, from a legal point of view, is yes.

MR. LANG: The second point, does Eldorado intend to comply in any regard?

MR. GRANT: When you say comply, if you are asking if Eldorado is legally bound to do so, the answer is no.

MR. LANG: I understand that.

MR. GRANT: If you are asking me, and I have already discussed this with the local municipal governments, both regional and directly municipal, what we intend to do is deal specifically with their local requirements, without admitting that their laws extend to the federal government. We propose to meet with them We have endeavoured on many occasions to discuss their municipal requirements from a zoning and planning point of view in an endeavour to comply with them. But we cannot -- we are not that permitted to, from a legal point of view -- say that their laws extend and bind the federal crown.

MR. LANG: The last sentence on page 39 says that if you are required -- you are not required, obviously -- if you choose to allow yourself to follow the procedures -- if you do choose to follow that procedure, your schedule could be different from the one you contemplate - the procedure by which you would conform to the zoning would have to be changed.

MR. GRANT: This is a Ministry of Environment of Ontario document. It is not our document. Even the Ministry of the Environment, Ontario, one elects to its own government, for example, in Darlington in hydro, which is a provincial government agency, they have elected to go a slightly different route than what would apply to you and I as private

citizens. I am not prepared to say at the moment that we would go through the delays in various levels of procedural approval required to seek a formal rezoning of this property. My information is now not to proceed in that way. In fact, we have indicated that to the municipal government and the ministry of the environment, the deputy minister of environment has quite candidly stated that as far as he is concerned, his ambit of authority does not extend to us. But, nevertheless, we are here and talking to these people, we are dealing with the ministry of the environment, we are interested in their views, and on the same basis as we pay municipal taxes in the form of grants in lieu of taxes, we propose, wherever possible, within reasonable parameters, to comply with all proper and legal municipal requirements. We do not propose to ride roughshod over the wishes of the municipality, but we cannot agree to be bound. For example, they may decide to pass some by-law in this municipality that, in spite of what everybody else says, they do not like nuclear energy and they would rather have the world provided by solar energy. We could not agree to be bound by such a law.

MR. LANG: I don't think they have the authority to do that.

MR. GRANT: Nor do they have the authority to bind us.

MRS. THORPE: I want to clarify

two things on page 39. It does not say it is a requirement. We are quite aware that Eldorado is not subject to this legislation. We were pointing out if those steps were followed that the timing schedule might be optomistic, not knowing what steps Eldorado has already taken as far as the regional municipality and the local municapility planning situation is, and in fact we do not know what they have done. In fact, they may already be three quarters of the way through discussions or negotiations with the regional municapility. We did indicate at the beginning of the submission that we are concerned with the intent of provincial statutes, and we included this section on zoning and official plans for information to those people who are not familiar with the process. We are not trying to indicate that Eldorado is bound by it. We are saying what the process is for people who are bound by it. Eldorado obviously makes their corporate decisions within the bounds of the regulations they have to follow.

The second thing I wanted to clarify so that there is no misunderstanding, is that this is a provincial brief. It is not the ministry of the environment on its own.

MR. BIRD: I would like to pursue the line of questioning that Mr. Lang had started. I also focused on page 39 of your brief, but I focused on a different sentence. The sentence that attracted

my attention was the one that says: "The proposal does not conform with the proposed regional policies." In light of what we heard, I just simply do not understand what that sentence means because I perhaps interpreted it incorrectly that in fact in this whole area there has been no policy established. It is subject to a further special study, so I do not quite understand the implications of how this proposal cannot conform if in fact nothing has been decided yet. Could I have a little elaboration on that?

MRS. THORPE: I think Mrs. Luk will address that.

MRS. LUK: What I can do is read to you the policy of the official regional plans that relate to the special study number 12.

THE CHAIRMAN: Perhaps you could provide it to us. We already have the plan itself.

MRS. LUK: There is only five lines.

THE CHAIRMAN: Fine. Please proceed.

MRS. LUK: This relates to a special study area number 12.

"This area includes the waste disposal site of Eldorado Nuclear Limited. Careful in-

We are, as you are aware, trying to ensure that the panel does follow the statutes and can, but there is some confusion on our part as to whether or not the panel is going to look at the whole documentation right through alternatives. We did ask in the guidelines that the alternatives be considered in the final document. Should this document have been submitted under the Provincial Act, the discussion of alternatives would not have been satisfactory. But we also realize that Eldorado is not under the provincial statute, and we are not going to ask them to go through the onerous re-evaluation of the alternatives at this point, until we get more information to help us come to a position on whether or not the Port Granby proposal is acceptable or unacceptable, so we did not ask them to re-evaluate or redo an evaluation of alternative sites at this point.

THE CHAIRMAN: I would like to clarify or restate the remarks I made earlier both with regard to the intent of your act and what the panel will consider. The panel, wherever possible, will take the broadest possible whatever -- I almost said consider whatever it considers relevant to the decisions and recommendations that have to be made. That is a nice broad statement that does not lock me into anything. We will see how it develops.

Are there any other further points of clarification on the brief from Ontario?

MR. CHENG: While we have the Ontario monitoring people here, I want to ask a minor point of clarification. The province monitors certain stages or points and so does Eldorado. I understand that there are also some other agencies. Has there been some kind of integration or coordination between their monitoring programmes?

MRS. THORPE: I think Mr. Hughes should address that one.

MR. HUGHES: The answer is yes, that all the information and data are exchanged freely between the two parties and submitted I think to the Atomic Energy Control Board, also, as requested.

THE CHAIRMAN: Are there any other questions? Would you come forward, please.

MR. LANG: Mr. Chairman, while that is happening, one of the things I would like to see supplied by your group of ministries is some information that would summarize for us what the overlap is in terms of the buildings of these various large scale facilities that are provincial government oriented. I am talking of Wesleyville -- Darlington. It is hard for me to figure out how these three projects are going to come together and how they are going to hit each peak. You are in a position to gather together information on what the peaking will be on Darlington and Wesleyville and anything along that line. I think

that will give us some assistance, if you can do that.

MR. BROWN: I do not personally know whether we can or not, but let me say this, that we will undertake to advise you if we can, and if we can, we will certainly provide that.

PEGGY CLARK: You were talking about monitoring the sites and establishing additional monitoring at Port Granby. MS. Derow of the panel asked how that was brought to the attention of the province and Peter Hughes of the province answered that it was by complaint and gave noise as an example. My question is how do you establish additional monitoring of radioactivity. Unlike noise, it is not detectable by ordinary means. How could one complain? Should members of the area carry geiger counters with them at all times? What do you do? How do you complain?

THE CHAIRMAN: Are you directing that question at Ontario or Eldorado?

MISS CLARK: The province.

MR. HUGHES: I think that in the case of using the complaints methods of determining, that was specifically to noise and the question as asked. As far as other aspects are concerned, just by our very investigation process, knowing the companies and knowing what emissions there are. This is done on a routine basis and being aware of the processes, what is coming out, we can determine what monitoring is appropriate and

carry it out accordingly, and this is normal procedure for the ministry.

MISS CLARK: In other words, we wait for a couple of cows to die or something like this and then we know there is something leaking out of the site?

MR. HUGHES: No, that is not necessary. That was a special circumstance, and I would sooner Eldorado themselves answer the circumstances surrounding that particular incident.

MISS CLARK: Are they prepared to do that now?

THE CHAIRMAN: Eldorado, do you have any comments on the monitoring?

MR. GRANT: No, I would think our friend over here has stated the matter quite clearly. According to my understanding, we have explained the nature of the products that we might be emitting into the environment. They agree or disagree with us. If they disagree with us, then presumably they will monitor for whatever they think might be being emitted. Like any other manufacturing or industrial facility in this province, monitoring is a routine process.

MR. BROWN: I don't know whether it is possible, for the purpose of the province or the company, to guarantee one hundred percent infallibility in the monitoring process. If that is available,

obviously these problems will not result. There will be no problems. What we are trying to say is that we feel our monitoring process is adequate at this time. If it proves not to be, we have to do something about it. As far as the cattle situation, whether it is our fault or the company's, or a combination, hopefully that will not happen again and we have taken steps to make sure it doesn't.

MISS CLARK: I don't find that a very satisfactory answer because they are asking us to trust them completely.

THE CHAIRMAN: I am not sure what you are including when you are talking about monitoring. It might be helpful if Eldorado would include the type of monitoring you are doing now at the existing Port Hope refinery in terms of monitoring for safety of your employees and at the factory fence, if you like, would that be helpful to you?

MISS CLARK: Yes, that would.

THE CHAIRMAN: If you could give a quick resume, that would be helpful.

MR. GRANT: I don't know if we want to get into monitoring for safety of employees, but we are prepared to discuss monitoring generally. Unless this lady is married to an employee, I do not know why she is interested in the monitoring of our employees. She seems to have indicated an interest in cows.

MISS CLARK: I am interested in people. I am interested in the people in the Port Granby area.

THE CHAIRMAN: I was merely looking for a general discussion, for people who may not be familiar, to just quickly cover the types of things that go on now.

MR. FROST: Are you interested primarily in occupational or environmental safety?

THE CHAIRMAN: If you would take one minute on each.

MISS CLARK: I have indicated both areas, but I suppose I could say I am more interested in people who are of the general public in the area because they are not employees and they will not be examined like your employees will be. I am sure you have health checks on your employees and this sort of thing. Within the buildings it is easier to monitor, I am sure.

MR. FROST: I will take the Chairman's advice and go over both. As far as employees, we have a routine medical programme that requires pre-employment medical and annual medicals thereafter. We have daily -- we have a full-time plant nurse and daily services of a Physician on site. We do radiation dosimetry on all employees. This for external bata and gamma dosimetry. We do urine sampling for uptakes of uranium and chlorides. We do air monitoring in the plant

-- air sampling for airborne uranium. We have done other chemicals when they have proved necessary, but generally we do not have problems with other chemicals. I think that probably covers the occupational health aspects.

As far as environmental monitoring goes, we do stack sampling to measure what is being emitted into the atmosphere, water sampling on all discharges both from the refinery and from the waste management area. These involve full measurements and water quality analysis. The sampling schedule is set up in agreement with the Ontario Ministry of Environment some years ago and does get modified from time to time when conditions in the plant may change. Results are reported on a monthly basis to the ministry and the control board. We do air sampling around the site and in the immediate areas of Port Hope adjacent to refining for florides and dust fall which we analyze for total particulate and radium in florides.

MISS CLARK: How often do you monitor? Once a week?

MR. FROST: These samplers are in the field all the time and they collect samples on a monthly basis and sometimes on a weekly basis and analyze them at that time. What we are looking at is composite samples over a week or a month.

MR. SHIKAZE: Mr. Chairman, if I

may interject, the Ontario government did submit a monitoring programme document as a supplementary piece of information. Perhaps it could be given to the questioner. It rather outlines what is being done by the company and by the province.

MR. BROWN: We will make it available. It does set out the water, air, soil monitoring, and the times, weekly, monthly or yearly, and the location. I would be glad to furnish this. I believe the federal department is now involved in some aspects too.

MISS CLARK: Does it establish how long monitoring will continue after the Port Granby site -- the refining is commissioned? How many years are you going to monitor the area after the Port Granby site is established?

THE CHAIRMAN: I suggest that if you are going to get a copy, perhaps you can ask that question if you do not find the information there.

MISS CLARK: No one knows off the top of their head?

MR. BROWN: We will continue at least at the same rate it is continuing now on the basis provided in this report.

MISS CLARK: You still have not answered how I am going to know how I am in a radio-active area, unless I carry a geiger counter with me in the Port

Granby area.

MR. BROWN: I think the monitoring will continue after. If at some point in the future the plant effectively shuts down, it would continue thereafter. It would just not be abandoned. To tell you the exact time, I cannot tell you at this point. But if there is a figure, we will be glad to tell you. I will undertake to inquire and see if we can come up with something -- what might be a ball park figure, somewhere in the area of the year 2000.

THE CHAIRMAN: Mr. Brown, I believe you are scheduled later in the hearings. Perhaps you could address that at that time.

MR. BROWN: I would be glad to.

MISS CLARK: Where do I pick up the report?

THE CHAIRMAN: There you are. Your government is working for you -- your provincial government.

MRS. LAWSON: Could I ask a question of Mr. Hughes, please. Mr. Hughes told us that if their data monitoring found anything greatly amiss that they would ask the company to do something about it. Since presumably the department of the environment, together with the Eldorado scientists, have known for at least ten years that the rate of discharge from the two dump sites Welcome and Port Granby is at the rate of about fifteen gallons per minute, in fact, from

the Welcome dump site I believe there is a plastic hose that goes straight down into Lake Ontario, and that the levels of radium, uranium and arsenic flowing into the lake from these dump sites are well above the provincial standard -- seventy-nine times in the case of radium. I wonder why nothing has been done about it to date.

MR. HUGHES: That is not quite true that nothing has been done up to this time. As you know, a treatment system has been installed in Port Granby.

MRS. LAWSON: A pump house was erected in two lagoons a year ago -- within the last year.

THE CHAIRMAN: Excuse me. I would like to remind you that we were supposed to be clarifying the contents of this forty-three page document, and since both you and the Ontario government will be back later in the hearings, perhaps we could discuss these other elements at some later time.

MR. HUGHES: I am prepared to discuss any aspect of it with Miss Lawson at any time.

BRUCE LAIRD: Mr. Chairman, I will be brief. First is a point of clarification, either to Mr. Brown or perhaps to Mr. Grant. It is my information that the minister of energy -- the federal minister of energy came to Port Hope about a year or a year and a half ago and said something to the effect that the zoning compliances and the various other rulings and

so on that have to be obtained -- that would normally have to be obtained by a private company or a public company -- that Eldorado would also have to obtain those compliances in a way that is not necessarily protected as a crown corporation. I would like to ask Mr. Brown or Mr. Grant if that is in fact what the minister of energy said, and whether in fact that has changed, because it seems from what was said tonight, that it has changed.

THE CHAIRMAN: Perhaps you can clarify it for me. I find it difficult to see how it has changed. I thought Mr. Grant indicated that it was the intention of the company to comply with provincial statutes in spirit, even though they were not obliged to do so in law. Am I correct in my interpretation?

MR. GRANT: That is essentially my position.

THE CHAIRMAN: Mr. Brown?

MR. BROWN: That is my understanding. Obviously there is no statutory authority to impose some of these things on a crown corporation. As far as Mr. Laird's question, I am not aware of the statement being made, so I am afraid I cannot give you any help as to whether he did make it or not.

MR. LAIRD: That is really my question; did Mr. Gillespie make that statement?

THE CHAIRMAN: I'm afraid I

don't know if it was needed, but it seems to me what he is saying has been reinforced by what Mr. Grant has stated.

MR. LAIRD: The only difference, Mr. Chairman, is that it has been said by the Minister of Energy and it is not something I would take as being a policy statement by the federal government, not a policy position by Eldorado Nuclear, and I think there is a difference in those two positions.

THE CHAIRMAN: Okay. Thank you.

MR. LAIRD: My question is in relationship to the comments beginning on page 19, entitled "Soil, geology, groundwater." I do not want to read it, but the report discusses bluff and headwater errosion by streams, which should not be ignored, because wastes may be exposed.

In number two it goes on to talk about the fact that there is very little information presented on the chemistry of the leachate which is likely to be produced by wastes in various parts of the waste disposal site -- the dump site they are referring to. Over on the next page it talks about various methods to calculate the amount of water that will infiltrate into the dump site through the bentonite cover and the problems involved in that, and using a calculation that I am not familiar with, it says it gives a considerably higher value for infiltration than does the method that Eldorado has used for the calculation.

Dennis Brown:

My question is does the province feel that there is a real danger in seepage or other problems arising out of the proposal for the dump site because it seems here that they are raising some very serious questions.

THE CHAIRMAN: I think, however, we agree the dump site is an issue in the second phase and that is the type of question the technical experts can answer in that phase.

MR. LAIRD: I will accept your ruling on that.

I have one final question: Does the province consider it important that the adjacent land be studied along with the project site itself?

MRS. THORPE: I think I better let Doctor George Hughes address that question about the adjacent lands.

DR. HUGHES: What was the question?

MR. LAIRD: Do you consider it important that the adjacent land be studied under these various criterion, along with the site, itself?

DR. HUGHES: I am not sure that there will be an off-site impact except towards the lake. I am sure it will be taken into account. It is not really addressed in detail here, although there was a review of the regional geology or hydro geology given which did not indicate there would be a great deal of off-

site impact on the groundwater, which is my concern.

THE CHAIRMAN: Thank you.

Any further questions of clarification? I see one more.

GERRY LASONDE: In the middle of your last paragraph you mentioned:

> Section 322 mentions new proprietory technology which will be incorporated into the process. No information has been provided about the new process.

Now, I have really a double ended question. That sounds reasonable that they don't provide the information, being proprietory; on the other hand, how can you evaluate it if you do not have the information? I would like to know how it is planned to get the information across.

MRS. THORPE: Doyou want me to answer that question?

MR. LASONDE: I am asking the province to find out from Eldorado.

THE CHAIRMAN: We covered this in part this afternoon in reference to the fact that the panel was concerned with the mass balance, if you like. We are interested in knowing what comes in to the site and what comes out the other end by any direction or route. The details of the proprietory information as to what happens inbetween may not be relevant to us, except where it leads

to an emission or a discharge or something that might have an environmental effect.

There are additional regulatory agencies after this section of hearings which the company must satisfy before it can build its plant or put it into operation. These agencies concern themselves -- such as the Atomic Energy Control Board -- with the details of exactly what is happening, where, when, and how many times a day and so on and whether that is satisfactory to their regulations. It is a government method to complicate things, I think.

MR. LASONDE: But what you are telling me is that it was an indiscrete question of the province to ask.

MRS. THORPE: Perhaps I should say something now. Two points: This question that you are referring to was specifically indicated that this is the type of thing that the province takes care of in a detailed design phase. This particular aspect is taken care of by the Ministry of Labour under the Industrial Safety Act. There is provision under that provincial statute, I believe, and certainly under the Environmental Protection Act, the Act where we give approval for detail design, for a disclosure in confidence of matters like this to the degree necessary for the province to be assured that these standards and requirements are met.

The information is not made public

because of the proprietory nature, but enough information is made available in confidence to the approval bodies.

THE CHAIRMAN: Any further questions?

MR. BIRD: Mr. Chairman, I would like to ask one more question related to the extensive discussions we have had on monitoring. Reference was made to the fact that the information is made public; the results of the monitoring are public information.

My question really refers to the timing; that is when the data are made public. To my recollection -- I haven't got my copy of the E.I.S. before me -- is that the documents provided to Eldorado or providedto us on behalf of Eldorado almost always seemed to contain data from 1973, 74 and in one or two cases 1975. If in fact those data -- and my recollection there was that some of them came from the ministry of the environment and some of them came from the work of the C.C.I.W. and I think some came from other parts of environment Canada. But, in any event, they seem to me rather old data, rather than really current information. The time interval in many of them was barely over one season. If in fact the information is being published promptly, I would think that the consultants could provide us with much more up-to-date information that would cover a longer period and give us a better indication of trend.

My question to both Ontario and Eldorado is in relationship to the publication of data

and why we have only such old data in the E.I.S.

THE CHAIRMAN: Eldorado, do you want to lead off?

MR. FROST: We submit our data to the regulatory people, both the province and the A.E.C.B. on a monthly basis, usually a month behind, because we obviously collect samples and analyze them the following month and send out the results at that time.

MR. BIRD: It doesn't seem that any of that data got into the document, except as I say, 74, 75, at the latest. A lot of it was certainly old data.

MR. BROWN: I think, Mr. Chairman, in answering Dr. Bird's question or statement, my understanding is that the data are made available as soon as the process of evaluation has been completed and it is released to be available to the public, to the Atomic Energy Control Board and the company. I am not under the impression that there is any great backlog as a result of the quantity of tests that have been taken. So as to why tests from 74, and 75 -- or 73 and 74 and not any later, I am afraid I cannot assist you. Our position is that as soon as the data has been compiled and it is available, it is available on request by any member of the public or consultants who have been employed by the company.

MR. LANG: In the Globe and Mail,

about a week and a half ago, there was a report on the front page about the Abitibi case. The information officer for your ministry was reported -- quoted twice as saying the data in that case that was collected was not available until if in fact your ministry decided to issue a control order. If your ministry decided to issue a control order, the information was not available. Was he misquoted or is this incorrect?

MR. BROWN: I did not read the article you are referring to, and I don't know whether I can believe everything I read in the paper. You are giving me a fact situation that I am not familiar with. I would be prepared to investigate it and give you an answer. I don't know off-hand -- I don't know if anybody here can answer at this point.

MR. LANG: If I heard you correctly, you say that information, after it has been evaluated, is in the public realm.

MR. BROWN: As far as I'm aware. If I am wrong, I will correct and advise you and the panel and the public.

MR. LANG: All right. I will ask it the next time you appear.

MR. GRANT: May I ask Doctor Bird one question with regard to his problem. Doctor Bird, I gather that you are concerned that the data that we included in our environmental impact statement may be

dated and not the most current information that is available to us. If you can let us know what the particular data are that you are concerned about, we would be happy to advise you as to whether or not they are the most recent available. Part of the problem is if we were comparing data on an annual basis, year by year by year, it may be that we don't have a half a year or it was inappropriate to compare a half a year. The endeavour of our consultants was to provide the most up-to-date data as possible. If there are some that you think could have been provided on a more recent basis, we would certainly like to know that and we will find out why it has not been provided.

MR. BIRD: Thank you. My concern is that in a number of charts that I looked at there were data plotted over a time interval basis and often, or in some cases, at least, there were entries on the chart -- data missing -- in any event, quite a bit of fluctuation, which, in my past experience, I know is a normal thing to expect, but I do think that it would be easier for me to make some judgement about them if I saw over a longer period of time the trend increased, or in fact the particular year it was quoted was an abnormal year. I have no way of knowing if the figures for 1975 were in fact typical, if we are talking about the monitoring of the waste disposal area of Port Granby, and if in fact there has been a greater leaching action as a product of

time, I would have expected to find a trend over a period of years. I am only seeing the data for 1974 and 1975, and I don't know whether the situation got better or worse in 1976. If it is not available, fine. But we did hear that data are collected and analyzed very quickly, and forwarded to certain bodies within a period of a month or two. If that is so, as I sit here I cannot see any reason why your report, which came out in June, would not have data right up to the first of 1977. Perhaps there are some justifiable reasons.

MR. GRANT: We had some data in there as recent as February of 1977. Doctor Bird, I think the practical way to deal with this problem, since you are quite properly raising it, if there are areas of data information that perhaps is not the most recent, we would like to know about it, and if you would advise us as to which you are interested in, we will speak to our consultants and find out the answers to those questions.

MR. BIRD: I will make a very simple statement; any graph that contains data back to 1974 or 1975, I want to know if it possible to get data beyond that, and there are quite a number of graphs like that.

MR. GRANT: More recent than 74.

MR. BIRD: Yes. I would like it as up-to-date as possible. I do not have my copy here, so I cannot turn the page up now, but I recall quite a

number where the data that are given are only 74, 75 and maybe 73 or 74. I would like to know why it is not possible in all cases to have data up to the end of 1976.

MR. DOUG CHAMBERS: I believe you are referring in this case to some of the air quality data, as opposed to the water quality data. The water quality data does extend up to the end of 1976.

The floride data also extends pretty close to the end of 1976 as I recall. I think the figure you are referring to is a figure showing air quality data for the Wesleyville site. Part of the problem was that most of this data was available from Ontario Hydro, as opposed to the ministry of the environment, and part of the reason for the discontinuation of data is the sites were discontinued. In other words, they put monitors out in the field for a year or two and then they relocated the monitors or discontinued the study.

Another problem is that you collect data that is not your own at intervals, and it would be quite possible for us to again contact Ontario Hydro to identify what pieces of data they may have now for the Wesleyville site they have not incorporated and that may be feasible to do, if that would help address your question.

With respect to what is in the report, as I say, part of the problem in 1973 and 74 they were doing studies and some of these monitors were

continued and some were not. But, as I say, it would be feasible for us to contact Ontario Hydro and ask them for the rest of the data or forward the data to you, if that would be of assistance.

MR. BIRD: Is it fair to say the consultants did not set up any monitoring programme of their own during the period of evaluation? All the data in the report anyplace -- monitoring data -- are data collected by others for other purposes.

MR. CHAMBERS: We did not set up a monitoring programme. What we did do is undertook to go into the field to do surveys -- biological surveys and water quality surveys. We did not take measurements of air quality or radioactivity.

I think I would ask Mr. Frost to address the question of what Eldorado proposes to do between now and when the plant would come into operation, assuming it goes ahead.

MR. BIRD: I think that would be a very worthwhile question to ask because there was another concern that I did not know when the point was when it would be most appropriate to raise it, but I do not recall seeing enough information about the plans for monitoring and the regularity of it.

MR. CHAMBERS: I think I can initiate that. It is stated quite clearly in the report, in effect, it is presumptuous for Eldorado to develop in

detail a monitoring programme without close consultation with the provincial government and federal government. However, I believe we have identified those species which we feel should be considered. Now I pass the mike over to Mr. Frost.

MR. FROST: Following on what Doctor Chambers has said, we did want to propose a detailed monitoring programme before the hearings before the ministry of environment, before the federal ministry of fisheries and the environment, the R.P.D. and A.C.B. had seen the documentation to get a grip on the type of process and formulate some idea of the type of monitoring that would be required.

We had given some thought to a monitoring programme. We would plan such a monitoring programme to start in 1978, so that we would have two years of baseline data before the plant started up. I can briefly run down some of the items that we would expect to cover. Unfortunately, I have not got this organized as separated into baseline monitoring and operational monitoring.

THE CHAIRMAN: Perhaps you could provide it to us in an organized form, if you like, in the interest of time here and to also allow all of us to study it.

MR. SHIKAZE: The province, in its presentation, provided the panel with a couple of

supplementary documents; one of them being objectives for control of industrial waste discharge in Ontario, and the question I have is there is no reference to limits for radiological parameters such as gross alpha, gross gamma or radium in there. Is there any reason for that?

MRS. THORPE: I am going to ask Mr. Hughes if he can address this question. I am not sure if the appropriate people are here for that. I am going to ask Peter to try.

MR. HUGHES: I think you know the answer already, Mr. Shikaze, that the ministry does not have standards for those.

MR. SHIKAZE: In the objectives there is nothing in there. I understood there were some numbers available for perhaps the mining industry.

MR. HUGHES: For the mining industry specifically. I am not aware of radiological parameters, certainly chemical ones. We will certainly check that out. I am not aware of any.

MR. SHIKAZE: The question that I was leading up to is that I believe there are some numbers available and would people representing the province consider this a possible issue with respect to whether these numbers are the numbers that should be used. I understand there is some debate with respect to what numbers should be used.

MR. BROWN: To be honest with

you, Mr. Shikaze, I don't know whether we have given it a lot of thought. We will endeavour to get back to you and provide you with whatever information we may have and give you our position.

MR. SHIKAZE: I have a short question for clarification, not so much for myself, but for the rest of the panel, would you differentiate between objectives and standards? I think it would be very useful to do that for the other members of the panel.

MRS. THORPE: I can do that very easily. The ministry of the environment only has standards for air emissions, and those standards are contained in the Environmental Protection Act and Regulations, which you all have received copies of. There are no standards for anything in water. There are water quality objectives. I say there is also available, but I don't think we brought them along today, a pamphlet produced by the ministry stating what all the water qualities are for different uses. Was that the answer you wanted, or do you want more information?

MR. SHIKAZE: Perhaps a little more clarification on how you use those standards?

MRS. THORPE: You are asking about the approval process then?

MR. SHIKAZE: Not necessarily the approval process, but for clarification, how you use the approval numbers in determining whether the company has

to meet a particular number or not.

MRS. THORPE: That question is obviously something that the industrial people have to address. Mr. Hughes, although he is not in the industrial approval section of the ministry, might be able to address it. If he can't, we will endeavour to have someone here who can address it.

THE CHAIRMAN: In view of the fact that we have taken an hour and a quarter to clarify your quarter hour presentation, we could perhaps discuss it at your next presentation.

MRS. THORPE: I would be happy to do that.

MR. CHAIRMAN: Since we have taken quite a bit of time with the province, it might be appropriate to have a coffee break now.

SHORT ADJOURNMENT.

--- Upon resuming ---

THE CHAIRMAN: Our next speaker is Gordon Henderson, Ontario People's Energy Network.

MR. GARY GLOVER: My name is Gary Glover. Gordon could not come down. He is sitting with that three volume report on his desk sort of staring at it stupified .

I feel a little bit strange following after that really technical thing, because I don't have anything technical and I guess that is the main reason I came here, because I don't have anything technical. There are two sides to that: one is that there is more than a technical question here; and, the other, is that we did not get the information in time to put together any kind of brief. I was more than a little bit tempted to present a blank piece of paper and say, "Here is my brief," because that is as far as I got on it. The only thing that I really have to say has to do with the fact that I have a blank piece of paper that I'm coming with. I thought that would be a little bit dramatic to give this blank piece of paper, when what we really have to do is look at the public participation here because I think it is crucial.

I will start with a brief explanation of what OPEN is about. OPEN is Ontario's Peoples Energy Network, whom I am representing right now. What we are trying to do is help people in communities in

Ontario have input into decisions or even to make the decisions that are going to determine their energy future. Those decisions are happening right now. We believe in OPEN that community -- it has to open at the community level, instead of at the public hearing level, even, as is happening with the Porter commissions, or this Eldorado thing. It is dealing with one community. It touches a lot of communities. It touches all of Ontario, basically. It touches all of Canada. It touches all of the world, even. I will get off what OPEN is about.

I would like to draw a time picture now to talk about why I do not have the information I would like to have, the kind of technical talking about things. Okay. Two weeks ago is when we found out about these things at all -- two weeks ago -- and that was an accident. A member of OPEN was talking to a local resident, and the local resident happened to mention these hearings. I think there is something that has to be done about that. There has to be greater publicity about this. I think it is really important that people know that this is happening. The following day he sent away for the Environmental Assessment Act. He received it four days later and he is still sitting there looking at it, as I said, as am I, as I said. We got that last Tuesday, the 20th, and we were expected -- as I understand, anyway -- to put together some kind of critique on this kind of document in just a little over a week. That is totally impossible. I think we all know

that.

I guess another thing I just thought of, though, is we thought we were going to have twelve days. We thought maybe we could do it in twelve days instead of eight. We didn't even have that, which is something else I came to complain about. We got the letter last Friday telling us that we were tonight, instead of Tuesday as we had originally asked for. What I am trying to do with this sort of time thing is say there is a lot of sort of faults in giving information out -- just in the timing of information. It is not getting out, at least to us, very well.

On top of that the environmental assessment document itself is, like, totally overwhelming -- I mean for me. As I said, like, I am still, like, stupified with it. I am still poking it with my pencil, too.

I think that the only people who are going to sort of get all the way through that kind of document are the most determined or those with specific training, or people who are paid to do it. I am not saying that people in communities do not have the expertise or the understanding or even the intelligence or whatever to understand this kind of stuff. I am just saying that, first of all, I don't have time. I have a job. To come to hearings like this I have to take time off from it. I have to sort of educate myself before I tackle anything like this. I don't have the time.

I don't have the resources available to me. For me to go and try to read that, I have to go and sit in the library for three weeks and look up every third thing about what's happening there and say what does this mean and what does that mean. It is really, really difficult. I guess what I am trying to say there is that if the people are going to have any real input, any real input on the technical level, into this discussion, then there has to be -- there has to be money available for the people in the local area to hire independent consultants that can help them understand that report and help them understand the other things coming out.

I was trying very hard to understand about emissions and things like that and I was listening to the radio about "pickle curries" and "millorams."

The other thing that money is needed for is for community groups to actually do some setting up of meetings. What has been my experience with government groups setting up meetings -- and I can talk about that a little bit more -- is that there tends to be a presentation of a scenario, and then things tend to go on from there. There is a presentation of -- well, let's say the Shaw Falls thing. Shaw Falls is a proposed new nuclear plant near Arnprior, and the public meetings to date have been that hydro presents their notion of what would be nice, and what would be good, and what it would look like, and how they can make

this into a park over here and stuff like that. So it is fixed in people's heads that here is the scenario, and instead of questioning whether that scenario is necessary, which I think is an important part of participation, the scenario is set and technical details are questioned, strategies are questioned, tatics are questioned, action is questioned, but never the essential policy, never the objectives, etcetera.

Basically what I am saying about that is that people, in order to put up some kind of contesting of that document, there needs to be money made available. There needs to be resources made available. I think that is fairly straight ahead.

That is basically my criticism of the sort of content of the participation process as I have seen it up to this point, and admittedly I do not know all of it and I may be putting my foot in my mouth and insulting a lot of people unnecessarily. If I am, I am sorry. But on top of all this, and in my mind paramount, the question I have always been told is the dirty question and the question you do not bring up at public hearings is the emotional question -- the moral question, even. That question boils down to we are told we need Eldorado because we need nuclear. We are told we need nuclear because we need continued high energy growth. But do we? If we opt for high energy growth, we need Eldorado. Maybe not here, but we need it somewhere. If it doesn't happen here, it is going

G. Glover

to happen somewhere else. I think that is a fact that we have to accept. If we opt not to freeze in the dark, which we are told is the other option from high energy growth, but if we opt for say the conserver future -- like the Science Council just put out a booklet this week -- a really interesting booklet that a lot of people would enjoy reading -- talking about Canada's option for a conserver society. If we opt for that kind of thing, then we do not need Eldorado. We do not need nuclear. I think that this is the emotional question, and this is the question that has to be addressed by the public.

Francis Braga, who did a report for the Ontario Government on public participation, as a matter of fact, I think "The" report as far as I know, said that one of the best places for public participation is in policy formulation. If you have public participation in policy formulation, then everything, all the way down the line, becomes one hundred percent easier for one thing, and if you do not have it, then every step down the line you are going to be tackling policy questions. Every time you come up against a strategy question or implementation question, people are going to bring up policy. Rightly so. That is my right as a citizen. It is to talk about these kind of things. It is to say, "Yes, I want this," or, "No, I don't want this."

What I am trying to say is that I do not have the answers and I am not advocating either way to go, I guess, but in order to have a real public participation process, it needs to start from the level of policy; it needs to start from the level of whether we want to go in the direction of high energy growth. Unless it starts there, basically it is a farce.

THE CHAIRMAN: Thank you. Have you concluded your remarks? You covered quite a bit of ground in a short period of time.

I have one question of clarification for myself. Would you tell me where you reside?

MR. GLOVER: I reside in Ottawa right now, and I am in the process of moving up to just the other side of Perth. I have just bought land out there.

THE CHAIRMAN: The reason I asked the question is that notice of these hearings were published in the Ottawa Newspapers in August. We also had direct mailing efforts in this area. We did not direct mail to all of Canada, obviously, and I was trying to get at the reason why you did not become aware of these hearings any earlier than two weeks ago. I think the fact that you are in Ottawa has something to do with it.

MR. GLOVER: Yes, that has a lot to do with it.

THE CHAIRMAN: Are there any questions from the panel? Questions from the floor?

MRS. MARY CLARK: Mr. Chairman, I would like everyone please to turn to page 37 of the Province of Ontario brief, paragraph 5:

> "According to the Canada Land Inventory Classification of Capability for Agriculture, close to 75% of the 657 acres in question is of Class 1 soils. These are the most productive lands for agriculture, with no limitations for the production of common field crops."

My question is for Eldorado. Why Port Granby? Why not some barren waste land. I want to know why they want to locate in Port Granby.

THE CHAIRMAN: We had intended to clarify the presentation of the previous speaker, but perhaps Eldorado would like to attempt to respond to that.

MR. GRANT: Just why generally? Or why in any particular area, Mrs. Clark?

MRS. CLARK: Yes, Mr. Grant, any "why" you like.

MR. GRANT: Here I thought this was going to be a dry scientific hearing, but we have a little Scottish humour going on here.

THE CHAIRMAN: I think before

Mr. Grant launches into reading all 1100 pages, which is a tactic he might use, we might point out that alternatives are considered. You may well feel they have not been adequately considered and so on, and that is the type of concern we like to hear, but I think you are asking Eldorado to repeat here in one or two minutes what they spent a few years studying. It may be rather difficult. However, perhaps Mr. Grant is capable of answering.

MR. LANG: Mr. Chairman, perhaps I would like to hear the same question responded to. I think that it is reasonable to ask you to give us in a nutshell what your reasons are, and to boil down into a few sentences why you chose this place which has been of course, already elaborated, but I would like to hear it in brief summary.

MR. GRANT: Well, as the Chairman has already said, we have taken 1100 pages in the final report and many, many months of study to determine why this particular site is environmentally acceptable for the purposes for which we intend or would like to use it.

I think the best answer I can give Mrs. Clark at this point of time, within the time frame allotted, is to repeat to her, since she might not have been here last evening --

MRS. CLARK: I was, Mr. Grant.

MR. GRANT: Last evening the

Eldorado people explained, I thought rather quite succinctly the fundamental parameters of what you need in order to build and operate a nuclear refinery. Some of those parameters cannot be satisfied in an artifical manner. One of the parameters is a very large supply of water. That supply of water could not be satisfied in some barren wasteland, as Mrs. Clark suggested. A very good supply of such water exists in a large body of water known as Lake Ontario. That is one of the reasons we have elected to look at Port Granby and finally decided to propose it as an acceptable site.

The second thing you need to operate a nuclear refinery is a good deal of electricity, something of the order -- and I stand to be corrected in these technical matters -- of 10,000 kilowatts for some period of time. In fact, in the barren wasteland, I am sure we wouldn't find the availability of that quantity of electricity at anything approaching any reasonable cost. So the second thing we need is a vast amount of electricity for the purpose.

The third essential factor is that we have to have transportation both coming to the refinery and taking stuff away from the refinery. We bring to the refinery by various means, either by truck or by rail, such things as yellowcake and various chemicals used in the manufacturing process, and we take away from the refinery uranium hexafloride in very specially

designed and constructed containers which are moved from the site by truck.

We also have to consider the question of the disposal of the waste products which we create by the refining process, and we think that this site enables us to deal with that quantity of waste in an economically and environmentally acceptable manner.

Putting all of these things in a hopper, we have decided that the ideal place for the refinery is where we have now recommended it. We have not been unaware of the so-called environmental impact. We have not been unaware of a thing I know Mrs. Clark is very concerned about, that is the withdrawal from economic agricultural production of which she considers to be Class 1 agricultural land. We are not unconcerned or unaware of that issue. The fact of the matter, however, is that out of total of 650 acres, approximately, we will be removing from effective agricultural production possibly 50 to 70 acres. We have stated clearly and quite candidly that we will not be removing or destroying or altering the remaining large acreage.

I invited Mrs. Clark at coffee break to consider other possible future uses of this kind of area. We have heard some talk of industrial development. I think Professor Lang touched on that issue. It could, in future, perhaps not in our

lifetime, happen that this whole area may become a vast industrial or highly developed residential area. In fact, I would, as I said, be delighted to own a residence near the boundry of this refinery because I would be assured that for many, many generations, not years, my children and subsequent owners of my property would be looking upon a totally unoccupied area of land of vast magnitude.

A VOICE: That's for sure.

MR. GRANT: Why we selected it -- we have not overlooked your concerns -- but the reason we have selected it is because that it seems to my client to fit ideally the requirements of a refinery.

Short of 1100 pages, that is the best I can tell you.

JOHN HALL: My name is John Hall, and I reside in Bowmanville. With respect to the gentlemen who are here, I first learned of this by direct mail this past Thursday.

THE CHAIRMAN: Any further questions?

We will go on to our next speaker, Mr. Michael Phillips.

MR. MICHAEL PHILLIPS: Mr. Chairman and panel, I would like to express my thanks to you for the opportunity to appear before this inquiry to express my views on one aspect of the Port Granby

project: that is the view as to radioactive waste disposal. I read in the Globe and Mail this morning -- and I have already sent my bill to Ottawa for $350,000. So far I haven't got any money yet, so perhaps my cash will be a little sparse, but I want to put in my two cents worth.

At the outset, may I say that I make a living as a prospector for uranium ore in Ontario, and further, that I am justifiably proud of Canada's contribution to the technology of nuclear power generation and of contributions in all phases of exploration, mining, refining and in the advances in nuclear medicine as practiced in Canadian hospitals today.

Ontario is blessed with ample uranium ore, mining and refining facilities, and not only the technical competence, but also the large financial resources to supply Ontario's energy needs and also to act as a nuclear cow or nuclear wet nurse to Ontario's good neighbours -- Manitoba, Quebec and the United States.

> "What then can be the catch to this bright golden irrediscent dream of unlimited power in the world so soon to be desperately short of power?"

I feel the stumbling block that can prevent this dream is a fact that we do not know how to handle our nuclear wastes.

The stage is set; on the one hand we have thousands of engineers working to build the big reactors, and on the other hand, we have hired the illustrous firm of the three brothers called Dimwit, Halfwit and Nitwit to dispose of our nuclear wastes. Billions are spent to build reactors and refineries and about fifty cents is spent for a plastic bag to get rid of the deadly gamma ray emitting garbage. I feel we are like a galloping horseman coming to the intersection of three roads, and upon being asked, "Where are you going?" the reply is "I don't know, but I am in a hell of a hurry to get there."

In talking about radio active wastes, I can recall as a child living in Wakefield, never ceasing to wonder about that magic little factory in Port Hope that made the radium paint that made watch dials glow in the dark. Unfortunately, the workers of this plant had deadly rememberances of the effect of gamma radiation some twenty years later. The same applies to some radio active material left long forgotten on the shelves of an office on Victoria Street in Toronto.

Further, I remember as a child in Oshawa, one Halloween night my bedroom shaking with an active earthquake -- what effect would this have today on the bentonite (Alberta cowmanurite blanket) which I call Alberta cow manure, referred to on page 6 of this report?

We can refer to three recent episodes in the Port Hope area where radio active waste mismanagement that resulted in some psychological damage. Indeed, one of Canada's largest uranium mines just recently discovered that it had permitted housing to be built right on top of its richest ore deposit, thereby exposing the miners to the dangers of radiation.

The key point in my presentation is that when talking about radiation, we must shift from normal time to geological time; instead of one year time units, we must think in terms of 100,000 years to map the duration of radiation and its geological movements over time. Every time we alter or process radio active ore we are in effect lighting an increasingly longer fuse that not only could, but will blow up underneath future Canadian generations if not handled with scrupulous geological care and consideration. Radiation has not conscience or memory. It never forgives and it is deadly for hundreds of thousands of years. I remember driving to Florida last winter and partaking, as it were, in the great Canadian winter escape, and spending some time around Oakridge, Tennessee, where the Americans have a large nuclear endeavour. They too had the answer to nuclear waste disposal, somewhat more elaborate, I can assure you, than is contained in this Port Granby proposal -- sufficient to say that it was leaking badly.

In theory, you can put highly

radio active waste in a thick lead coffin and burr it deep in an old mine. The lead lasts only 50,000 years, while the radio activity goes on in excess for a quarter of a million years.

In practice, I nearly died of shock when I read in the Port Granby project that they plan to dig an eighteen foot hole, only a half mile from Lake Ontario, and put the waste, as it were, in Glad garbage bags, topped with benotite or cow manure. Here again a feeling of deja vu came over me. Here we have the type of thinking of a pregnant elephant who thinks that she can walk across Grand Canyon on a spider's web. She will be in for a nasty surprise. In the same way, recently mismanaged radio active waste at Port Hope caused psychological havoc, people who cannot learn from recent history are doomed to relive it.

As a citizen who is interested in nuclear power, I do not come here only to criticize. I come to also suggest a way out of this dilemma. Here it comes. We in Canada have something in abundance that none of our neighbours have; we have the great Canadian Precambrian shield. There exists some two million square miles of it. This shield is over two billion years old, possibly three and a half billion. In a few thousand years, when our rocky mountains have been flattened down to the flatness of our prairies, this giant shield will have only been erroded down by

one quarter of one inch, or point six two centimeters. This will give you an idea of the toughness of the shield and geological permanence. This is, I suggest, the place to dump our waste.

In Ottawa we have a highly skilled multi-disciplined group called the Geological Survey of Canada. They can usually locate a pluton, which is a fancy name for a huge granite plug, and this plug can be found many hundreds of miles from any inhabitation; not the 800 meters as they have in the Port Granby project. They can sink a sloping shaft down and create a safe permanent storage place, not only for our nuclear race, but also for other countries as well, and this will help to pay for it. It will also provide that in the future, if they ever want to reclaim some of this, they will have access to it.

What I feel is required is for the Atomic Energy Control Board and Eldorado, who effectively control all marketing phases of radio active ore processing and the requisite provincial counterparts who exercise a high degree of control, plus the operating mines and hydro utilities in Canada, to stop passing the buck while making a big buck and start this project immediately. When it is completed they should transfer their wastes up to the Precambrian shield for storage in a place so safe it would deflect any and all criticism. We spend billions of dollars and we have not yet really started to

roll on nuclear energy. The Port Granby project tells us that they want to bury their waste down eighteen feet, which is no deeper than the old country outdoor crappers. They are to bury not what is biodegradeable, but what is eternally deadly.

The enormity of this proposal is deeply insulting not so much because of the tremendous imbalance of the money spent, that is millions on one side to develop atomic energy, and the pennies to get rid of the waste, but the deepest insult is to the ethical and moral principles which say love your neighbour, not scare the hell out of him or radiate him to death. Glad garbage bags just won't do.

Eldorado is creating a situation, I feel, between themselves and not us, but future generations of Canadians that is like two protagonists dualing with hand grenades at a distance of four feet. There can be no winners to this one.

I hear, with despair, that Eldorado is planning another refinery in Northern Saskatchewan, close to the rich uranium deposits there. Although I have not seen their plant for nuclear waste disposal, I would suspect that it calls, again, for the Glad-bag cowmanurite approach.

Our good neighbours to the south, in an effort to clean up nuclear wastes as applied to warfare, have come up with a clean bomb called the neutron

bomb. This bomb limits the area of physical destruction and cuts down on the overall period of radio active after-effect. If in warfare we can be clean, why not in peace-time?

In closing, I would say that we would certainly not permit the Royal York Hotel to throw their garbage out in the street; therefore, why should we permit Eldorado to dig a hole no deeper than an outhouse and dump their deadly radio active waste in it, hoping that no earthquake or errosion in a short geological time-span will dump it into Lake Ontario. The great Canadian Precambrian shield offers many huge granite plugs that would ensure complete safety in terms of geological time. We have the men, the skills and re-sources, and the place for the waste. Let the federal, provincial, utilities and producers stop attempting to stand on a rug of banana peels and put an end to this problem now, and thus permit the unfolding of the golden irredescent dream of energy for us and our neighbours to unfold. Let us get rid of Glad garbage thinking. Let us get rid of the construction firm of Dimwit, Nitwit and Halfwit, and gently stop the pregnant elephant from starting on her fatal voyage.

I see in the paper this morning that some of our far eastern trading partners think that half the Canadians have become overpaid, underproductive, indolent, lazy, strike-prone and overtaxed. Be this as

it may, in whole or in part, let us not give them the opportunity, as well, to call us stupid when it comes to dealing with nuclear wastes. We may sell some reactors too cheaply, or we may waste hundreds of milllions of dollars in construction of heavy water plants that don't work, or careless cost overruns. These mistakes we make and we pay for. They are important, but not that important. Nuclear waste mistakes are forever and are deadly and will seldom, unfortunately, kill the fools that make them. High up and deep down in the shield is the place for nuclear waste. I think the place could possibly be Baffinland, but certainly the place is not under a threadbare bentonite rug, as is proposed here.

Thank you very much, Mr. Chairman, for your time.

THE CHAIRMAN: Thank you for your brief, Mr. Phillips.

I do not know if you were here last night, but we have tentatively concluded that the entire waste disposal project is an issue to be discussed in our Phase 2 hearings, and we hope that you can be present for them when that subject is discussed and discuss it with other experts in the area. There will be plenty of notice of the Phase 2 hearings.

I have a point of clarification for myself, I would like to ask that although you concentrated your remarks on the waste disposal aspect, if

you can leave that aside, have you any comments to offer on the refinery being located as proposed in the project?

MR. PHILLIPS: Mr. Chairman, my field of expertise does not specifically apply there, but as a Canadian citizen looking at it, and I have been watching Eldorado in Port Hope for many years, I have to conclude, since no one has been killed in their operations, I would say that all of us make mistakes and I think Eldorado, in giving them credit, have made damn few mistakes. I am certainly all for a refinery because I realize they ship out an important product and my only objection to it is the fact that I do not think digging the stuff eighteen feet down is quite good enough for us. I think there record is good, and I think Canadians can be really proud. We have one of the few nuclear reactors with less down time than any other system in the world, and I can see the need for nuclear energy, and I have no objections to Eldorado building a refinery. My only objection, Mr. Chairman, is to what they intend to do with the waste.

THE CHAIRMAN: Any other questions?

MS. DEROW: Perhaps we could discuss the relationship of the refinery and waste disposal. It seems to me that we are not quite clear about the fact of safety if we locate a refinery in one place, far, far away.

MR. PHILLIPS: Yes. I am sorry. I should have made that clear. In other words, I came here tonight to talk about nuclear waste at this particular refinery. But over and above Eldorado, I am sure there is deadly waste coming off stream from the six or seven nuclear reactors working across Canada. What I am looking for is one resting place for all the waste -- all the dangerous waste in Canada. I know that you cannot put mine tailings in, but I can't see why the electrical utilities using nuclear powers cannot easily ship their waste, all of it, to a safe storage place. I see this as the final answer to all nuclear stations in Canada.

MS. DEROW: Is the shipping of nuclear waste technically feasible? Is it safe?

MR. PHILLIPS: Yes, I think it is. From the American's experience, theyhave developed some sophisticated ways of doing it. On thinking about it, why I perhaps indicated Baffinland was that nuclear materials can be stored safely for short periods and be carried by ships for two or three months out of the year. There are various relatively inexpensive ways to do it. So far as I am aware, very few nuclear accidents have occurred in the transportation of either enriched uranium or the basic products going in. I can't see that as presenting a problem. I think Eldorado for years has been doing it, and I have not heard of any serious accident in that regard.

MR. LANG: Would there be an opportunity for us to hear if there were such an accident? You are talking of an accident that would be so dramatic that there would be two planes crash as we had awhile back in Ontario, but what about just simply spilling of wastes or the emission of radio activity. If it wouldn't be monitored, how would we ever find out?

MR. PHILLIPS: I should be specific and say that the only nuclear waste accident I have heard of in Ontario when they were carrying some of the mildly radio active ore out of Port Hope with the gravel and it spilled a little bit. What you do is when you ship the enriched uranium by truck, or you are shipping a load of radio active waste, is you follow it every minute all the way until it then reaches the harbour in Montreal, you follow it loading on the ship and you follow the ship closely all the way. You can see what happened when the Americans lost a small atomic bomb off Los Polmas in Spain; you watch it, and you watch it much more closely than the Americans, whom I am lead to believe are missing all sorts of radio active waste that they cannot account for. I think it is not difficult to monitor or watch it in that way.

THE CHAIRMAN: Are there further questions from the floor on Mr. Phillips presentation?

PEGGY CLARK: Is it permissible to ask a question about transportation of the waste?

THE CHAIRMAN: It is permissible to ask. I don't know whether you will always get an answer.

MISS CLARK: You are saying that we can do something about getting rid of our Canadian waste from our nuclear plants and refineries. I would like to know whether you make a connection between exporting uranium hexafloride to nuclear plants in the United States, which would then have a waste problem to handle there, and we have no control of how they handle their waste.

MR. PHILLIPS: Yes, I think that is a real problem. In other words, this is in fact what we do do. We do ship to the United States and they do enrich it, but under my proposal, if we do get a good burial place in the shield for it, where it can be retrieved in the future, I can see little reason why we could not persuade the Americans to also place their waste there and pay a price for doing it. I do not see anything wrong with combining the American waste with ours. They don't have a Precambrian shield.

MISS CLARK: So we are going to regulate the waste from the moment it leaves our plant. Are they going to permit us to do that?

MR. PHILLIPS: This is just speculation on my part, but I think that if Canada found a safe resting place for the nuclear waste, I would surmise that possibly other countries might be interested

in storing their waste there. In the future it may become valuable.

MISS CLARK: Mr. Phillips, I would like to know where you got your information on the safety of the Precambrian shield. I have read reports suggesting that plutons do have safety limits and that graphite is succeptible to the heat and radio active waste particles. Maybe you should research that a bit more.

MR. PHILLIPS: There is a fair amount of research on it. You have to be quite precise about exactly what kind of granite plug you are going to use to bury it. My understanding is that it certainly will last for many of hundreds and hundreds of thousands of years and it seems to me much safer and a much further delay in the case of an accident then here in Port Granby.

THE CHAIRMAN: I think this is an area that we might explore in Phase 2.

MISS CLARK: Yes; I think it calls for expertise, really.

THE CHAIRMAN: Yes. We propose to have experts here who may answer that.

MR. GLOVER: If I could just change hats for a minute, I live on the Precambrian shield -- or I bought land on the Precambrian shield, and I don't want it.

MR. PHILLIPS: As I said, there

is over two million square miles of it. We will put it as far away from you as we can.

MR. GLOVER: That is what they said about nuclear weapons in the Pacific. There is a lot of country. There is nobody out there. There are people out there. There are people on just about all of the Precambrian shield, too. There are people living up there.

MR. PHILLIPS: Not on all parts of it. I would merely say this in passing, that I do not offer it as a final solution, but as a better solution. Not being a geological expert, I cannot comment any further, but we will look forward to hearing more about it in these hearings.

THE CHAIRMAN: Thank you. Any further questions?

Thank you Mr. Phillips.

We will now hear from Isabell Veldhuis.

MR. JOHN VELDHUIS: I am not Isabell. I think you can notice the difference. My dear wife was unable to make it due to family commitments, so she has asked me to come here on her behalf.

I believe I did provide a summary to this panel. There are some thirteen points, I believe. Let me say at the outset that I am John Veldhuis. I live in Port Granby, very close to the proposed Eldorado site. I find it regretable that I have

to be here to take part in these hearings, because I would have preferred it if a group of citizens known as SEAP had been able to do this on our behalf, and if they had been receiving necessary funds, I am sure they would have done so.

We are particularly concerned because the Port Granby area is a unique, quiet rural area of considerable aesthetic beauty. This fact is not only well known to the citizens of this area but has also been noted by the Environmental Impact Statement Appendix II p.66. The beach area of Lake Ontario is disappearing at an alarming rate all along the north shore of Lake Ontario due to the increased population and demands of industry, community services and other pressures of modern life. It is for this reason alone that it would appear that sane and sensible minds must do everything possible to protect whatever shoreline is still left and the bluffs, beach and shore areas of Port Granby are so beautiful that they should receive the highest protection priority.

The area is made up of dairy, beef and vegetable farms with some small homes and cottages for those families who have especially selected the quiet rural life style over the hussle and bustle of the larger urban centres. The farmers have invested all of their personal capital into their agricultural operations. They are now threatened with

the possible disruption of their dairy herds by noise from a proposed refinery and the possible pollution of the grass-lands and crops through radioactive air emissions. Not to mention the fact that the residents are afraid of the effect on groundwater and drinking water from wells.

I would like to hand out a description of the Port Granby area. I did not expect to be on quite so soon, I would have made more copies. This particular paper was prepared by a group called SEAP.

MR. GRANT: Mr. Chairman, before my friend pursues this avenue further, and I don't mean to interrupt Intervenors, but we heard last night from Mr. Veldhuis through his Counsel that SEAP did not propose to participate in these proceedings for the reasons as stated by him last evening. I would like Mr. Veldhuis, subject to your approval, to clarify at this point whether this material is being submitted by its author, SEAP, or he is endeavouring to get it through the guise of himself representing his wife now.

We should know, first of all, if it is SEAP, who the members are, how many members

there are and where they live. I think that information is relevant to you. It is important to us to weight the significance and determine the proper weight to be given to what Mr. Veldhuis says or what may be contained in that paper he has just passed around.

THE CHAIRMAN: Thank you Mr. Grant. As I understood last night, SEAP withdrew from the proceedings and if I understood Mr. Veldhuis correctly, he is appearing here as an individual.

While SEAP did withdraw, I would remind you that our panel is looking for concerns of people in this area, and I think that we would like to hear all of the concerns we can within the time available, so I take it that this presentation, although it does have SEAP on the front, it is perhaps not officially presented to us in a formal sense, but presented by yourself to the panel as further information for us to consider.

MR. VELDHUIS: That is exactly it. I simply offer that as one piece of information that is available to the residents of this area and I just thought you would like to have it.

THE CHAIRMAN: I take it you have no objection to this being made available to anyone else, provided we duplicate the copies?

MR. VELDHUIS: Very well put.

Background Information

Port Granby is a hamlet located in the South-Eastern corner of the Town of Newcastle. Its southern boundary is lake Ontario. Port Granby used to be an important port when barley was shipped from the piers to a number of Canadian and U.S. cities. The coming of the railways and the building of highways has resulted in making Port Granby a small rural hamlet concerned mainly with the production of dairy products, vegetables, tobacco and other agricultural products. The sandy soil has been particularly suitable for this purpose. The land in this area has been considered as Class I agricultural land. Just to the East of Port Granby and immediately next to Lake Ontario was a deep gorge. This site was considered ideal for a dump for nuclear waste materials.

In the 1950's Eldorado held a meeting with the citizens of Port Granby in the Wesleyville School to explain the problems which had come about due to certain problems associated with the Welcome dump.

The citizens of Port Granby and Hope Township were told that a concrete bunker or retainer wall would be placed in the gorge to prevent seepage of arsenic and radio active materials into Lake Ontario and that the area would be properly

fenced to make sure that no human or animal wandered onto the site, although, the citizens were assured that due to new technology the material was perfectly harmless.

Eldorado has several residue areas. Approximately 4000 - 5000 tons of radium extraction residues were removed from the Lakeshore Residue Area in 1957 and 1958 and sold to Vitre Corporation in the United States for the recovery of other metals; the remaining residue was transferred to the Port Granby Residue Area.

The Monkey Mountain Residue Area within the Town of Port Hope was used from 1945 to 1948 for the disposal of residue and large quantities were removed from this site to Port Granby in 1959 and 1966. A further 800 tons were sold to Delore Smelting and Refining Co. in 1959.

1. Webber, L.R. and F. F. Merwick; Soil Survey of Durham County Report #9, Guelph, 1946.

2. A.R.D.A. Soil Capability for Agriculture Canada Land Inventory, Queen's Printer, Ottawa, 1968.

Port Granby Residue Area

This site is located just East of the hamlet of Port Granby, about 1/2 mile West of a subdivision in Hope Township and covers about 28 acres. The site is bounded on the South side by Lake Ontario

and by farm land in active use on the other three sides. There is a farm house and barns about 100 yards from the entrance into the site. 1.

While it is claimed that the present residues have a low radio active content, measurements on a recent batch of solvent extraction residue indicated about 1.0 to 1.5 m R/h of penetrating gamma radiation on contact, and 67 to 68 m R/h of low energy radiation which is, presumably, the beta radiation resulting from decay of thorium - 234 with a half-life of 24.3 days. Contact measurements on UF6 plant residue gave 0.3 to o.4 m R/h.[1]

Drinking Water Standars

	Acceptable Limit
Arsenic	0.01 ug/ml
Radium 226	3 pCi/l
Uranium	5 ug/ml[2]

The A.E.C.B. has a maximum permissible concentration limit of 2 ug/ml for Uranium.

1. Knights, G.B., A.E.C.B. Memorandum 15-2-E1, July 6, 1975 (p.5)

2. These limits are those used by the Ontario Ministry of the Environment and are taken from "Guidelines and Criteria for Water Quality Management in Ontario, July, 1974.

Port Granby Residue Area

Analysis of Water Samples by Eldorado Nuclear Limited

TABLE 7

PORT GRANBY RESIDUE AREA

ANALYSIS OF WATER SAMPLES BY ELDORADO NUCLEAR LIMITED

MONITORING LOCATION	YEAR	ARSENIC ug/ml			RADIUM-226, pCi/l			URANIUM, ug/ml		
		MAX.	MIN.	AVE.	MAX.	MIN.	AVE.	MAX.	MIN.	AVE.
PORT GRANBY East gorge	1967	12	0.82	4.0	360	35	191	—	—	—
	1968	66	0.01	7.72	130	20	42	—	—	—
	1969	19	0.2	5.74	255	18	74.1	1.0	0.66	0.82
	1970	65	0.13	7.66	94	25	48.6	3.4	0.20	0.66
	1971	4.3	0.01	0.73	140	4.3	38.8	1.5	0.09	0.44
	1972	6.5	0.01	1.10	200	9.2	52	0.62	0.09	0.28
	1973	36	0.15	3.62	200	12	58	0.64	0.06	0.20
	1974	31.5	0.03	3.5	220	9	68	0.40	0.03	0.14
	1975	4.9	0.15	2.01	190	55	110	0.21	0.04	0.12
PORT GRANBY West Gorge	1967	8.6	1.8	4.67	730	65	395	—	—	—
	1968	36	00.01	7.7	910	260	530	—	—	—
	1969	4.5	1.3	2.43	535	191	372	6.0	2.8	4.2
	1970	3.2	0.83	2.34	415	130	276	6.6	1.4	3.68
	1971	3.9	0.60	1.98	330	95	162	7.1	0.93	3.98
	1972	2.8	0.09	1.26	37560	160	242	6.17	2.00	4.51
	1973	5.5	0.93	3.16	600	160	410	9.25	4.01	6.6
	1974	3.2	0.62	2.22	2180	370	957	9.14	5.53	7.07
	1975	1.68	1.00	1.26	1780	920	1500	11.03	5.53	8.00

As can be seen, the radium 226 and arsenic concentrations are considerably higher than the permissible criterion. The discharge into the lake is about 15 Imperial gallons per minute.

60 minutes in 1 hr. = 60 x 15 = 900 gallons/hr.
24 hours in 1 day = 24 x 900 = 21,600 gallons/day
365 days in 1 year = 365 x 21,600 = 7,884,000 gals/yr.
1 gallon = 4.56 litres
Flow per year = 36,000,00 litres/yr.

Divide $\frac{\text{pico Curies discharged}}{\text{litres discharged}}$ = 239 pico Curie/litre

Acceptable limit is 3 Ci/l.

$\therefore \frac{239}{3}$ = 79.6 times the acceptable limit.

Using similar calculations for arsenic we find that arsenic is 190 times above acceptable limits.

In 1975 alone 8,600,000,000 pico Curie of radium and 1510 pounds of arsenic leaked into the lake. The chemical toxicity of the escaping liquid is, in its own right, just as noxious: the highly alkaline nitrates present kills cows and could kill humans too.[1]

An added problem with locating any plant, refinery or residue dump in the Port Hranby area is

(a) The site has a high water table

(b) The site is located close to public waters (and has a creek on the East and West boundary)

(c) There is evidence of recent and continuing erosion on the site.

(d) There are indications of lack of stability of the lake.

(e) Permeability of the soil is high and the iron exchange capacity is low. [2]

Licensing

"The proper management of the radioactive wastes from nuclear installations raises significant health, safety and environmental questions since some of the wastes of these operations may retain their activity for hundreds of years". [3]

Grants

Eldorado being a Crown corporation and therefore receiving funds out of the citizen taxes in case of deficits in its operational budget does not pay taxes to a municipality.

A grant in lieu of taxes may be given. The grant to be negotiated by the Crown corporation and the Town of Newcastle.

1. Energy Probe "Report on Port Hope Radio Active Contamination," Queen's Park Cres. E., Toronto, April 19, 1976 p.4
2. A.E.C.B. News Release 76-8, July, 1976, p.2
3. A.E.C.B. Information Bulletin 74-1 January, 1974.

Expenses

The grants received by the Region of Durham

will result in a return of 25% of the total grant to the town of Newcastle, the remaining 75% will go towards the Region.

Additional electrical service will have to be provided by the publicly owned Ontario Hydro (an extra cost to the taxpayers).

A new railroad siding will have to be provided by the Canadian National Railway (a crown corporation - an extra cost to the taxpayers).

Snow removal will have to be increased (an extra cost to the taxpayers).

Additional traffic to and from the proposed refinery will result in additional policing)an additional cost to the taxpayers).

The proposed site is not connected to a sewage disposal plant (therefore, a sewage disposal plant will have to be built at extra cost to the taxpayers or the sewage will be discharged directly or indirectly into the lake).

The area is very suitable for agriculture and is used for this purpose (see page 1).

The soil being sandy and having a high water table etc. (see page 4) is not suited for a refinery or residue area.

The people presently living in the area clearly do not want any nuclear industry in Port Granby.

Many people bought or built homes in the area

because of the fine rural qualities now present. Industry such as Eldorado Nuclear Limited would destroy the sociological bond that has been developed.

Eldorado Nuclear Limited, being a crown corporation, does not make any political contributions nor does it contribute to charities, sports or recreational activities.

[1]Mayor Rickard

Eldorado has a detrimental effect on Lake Ontario now (see page 3). By increasing the present site by 51 or more acres it should be clear that the detrimental effect on the lake will be enlarged not decreased.

Erosion of the Northern shore of Lake Ontario is a well known fact. The Ministry of the Environment states the average erosion per year is 1 meter (about 39 inches). It will, therefore, take less than 35 years before the material in the Port Granby dump is subjected to the forces of Lake Ontario and will "swallow up" the present dump site and it will only be a matter of time before the proposed new dump is subjected to these same eroding forces.

The only reason Eldorado wants to locate in Port Granby is convenience. It is more convenient to take their nuclear wastes and radon contaminated

materials to Port Granby than to any other site.

They propose to bury the waste on the highest point in the area. An area surrounded by creeks. Any seepage, spill or run off will end up in the lake.

It is clear that contrary to the statements of Eldorado that the area could be farmed, it will in fact not be farmed and therefore, it will take yet another 675 acres of valuable farm land out of production.

Lake Ontario is "the drinking cup" of Southern Ontario and North Eastern U.S.A. Any pollution of this drinking water source no matter how small cannot be tolerated.

MR. VELDHUIS: Mr. Chairman, may I continue? This is on my own behalf.

THE CHAIRMAN: Yes.

How much pollution constitutes a significant disruption of what we now have in the Port Granby area? How much pollution must we allow to enter Lake Ontario until we realize irreparable damage has been done.

Eldorado will undoubtedly claim its levels are insignificant when we consider how large Lake Ontario really is. Yet if I were to flush my toilet directly into Lake Ontario I would be fined immediately and forced to clean up my mess. Yet, I'm sure every member of the panel will realize

that out domestic wastes don't last for thousands of years. But the arsenic, radium 226 and other toxic materials are well known to be long lasting materials which are fatal if ingested in significant quantities.

We are concerned that once again we are asked to trust Eldorado. Once again they have discovered a system which is supposed to take care of all their radioactive wastes. Once again no process of remediation and restitution is proposed in case something does go wrong.

In 1954 the farmers and residents of this area were asked to meet with management of Eldorado to discuss the proposed Port Granby dump. This came upon the heels of problems with the Dickinson dairy herd and the run off of the Welcome dump. The people were assured that a new process would make pollution and accidents such as the Welcome dump a thing of the past. A new management system complete with concrete retainer walls or bunkers would safeguard the Port Granby area and Lake Ontario from all releases of radioactive materials.

Yet, in 1975-1976 Mr. Bud Elliott, my neighbour, lost some cows because they had wandered onto the Port Granby Nuclear dump site, Arsenic and radium 226 have been leaching into Lake Ontario with levels far above the allowable limit (G. Knight's Report

Feb. 19, 1976). But the residents were promised in 1954 that this would not happen and assured it could not happen.

Now we are told a new process and a new containing material will eliminate all of our problems for the next 4000 or more years. Will we have to bring this matter up in another 22 years because this new system also didn't work as it was supposed to do?

When the problems were discovered at the existing Port Granby dump no remedial action was taken until S.E.A.P. and the A.E.C.B. brought pressure upon Eldorado. At this time we insist that the remedial action taken by the Company is insufficient and does not deal with the real problems of the dump. We also question whether or not locating a refinery and nuclear dump so close to Lake Ontario is the best particularly since any spills will end up in Lake Ontario either directly or indirectly and particularly since Lake Ontario is the source of drinking water of millions of people in Canada and the U.S. It could even be said that Lake Ontario is the drinking cup of Southern Ontario and the Northern New York State. We caution the people of Ontario that every time you take a drink -- think about the possible pollution of your drinking water.

The proposed plant will require 3,300,000 gallons of Bunker C oil per year alone. How many homes can be heated with that large a quantity of oil. It further will use up a very large quantity of electricity not to mention other chemicals and resources. These resources are non-renewable and finite in quantity by using them up to produce an export product are we not running the risk that we will deplete our resources so that the company can make a profit? Do we not run the risk that we will freeze in the dark in the future?

Americans and Canadians have long been told that ever-increasing energy production was the key to national economic well-being and jobs. It seemd enough to note that as energy production expanded over the years so did economic growth and total employment.

Many in the energy forum are therefore advising that unemployment can be ended only by stepping up energy, or nuclear developments to the greatest degree possible and with the largest possible systems.

Yet, current national high unemployment, has taken place while national energy use has been at an all time high, and is increasing.

Cass Alvin, Director of Public Relations and Education for the United Steel Workers of America told

a Los Angeles Federation of Labour (AFL-CIO) meeting

> "I think we've got to deal with the nature of energy and jobs very carefully, or we'll find ourselves looking to the wrong allies when confronting energy issues" ...

1. Cass Alvin, Energy Conference, Los Angeles County Federation of Labour, January 15, 1977

And an economist in the research and education department of the International Woodworkers of America (AFL-CIO/CLC) has warned

> "Unions risk disaster and perform a disservice to their members if they do not attempt to define energy and job relationships"

While at Louisiana State University, Professor Herman Daly has concluded:

> "Clearly, what is responsible for increasing total employment is the increase in total goods and services, not the increase in inanimate power production, which by itself must decrease employment"

A number of studies have shown that we use as much as two times the energy per person as do West Germans, Swedes and the Swiss. Yet the standard of living is comparable to our own. And unemployment in those European countries is much lower than in Canada.

To put the question in a local perspective

we question whether there are 350 employed construction workers in the Hope Township and Town of Newcastle area. The workers will therefore have to be brought in from some distance with an increased drain on gas and oil supplies plus a disruption of our area due to the "boom and bust" effect a temporary influx of 350 workers would have on the quiet rural hamlet of Port Granby.

We also question whether there are 150 unemployed highly skilled nuclear technicians in this area to supply the permanent working force Eldorado claims to need for the Port Granby operation.

Eldorado does not have a good record with the people of this area. One need only recall the problems at Port Hope with schools and homes contaminated with radon gas; the problems at the

1. R. Denny Scott, The Energy Dilemma - What It Means to Jobs. Woodworkers' International Union August 16, 1976.

2. Herman Daly "Electric Power, Employment and Economic Growth" in Towards a Steady State Economy, San Francisco: W. H. Freeman Co. 1972.

Welcome dump with radioactive and arsenic pollution running from the Welcome dump into Lake Ontario and the problems with dead cows, aborting cows, and the heavy handed methods used in the construction of the pipe line, the Port Granby dump

with its dead cows, broken promises, lack of meaningful information, pollution of Lake Ontario water, spills of radioactive wastes on the highways etc. to realize that Eldorado certainly is not a welcome addition to our quiet rural community. How can we trust a company who spends $1,000,000 to study an area for its nuclear dumps and cannot come up with a meaningful plan for retribution and remediation for future spills and leaks. How can we trust a company which refuses to even give us a chart of its company's senior officers?

We are firm that the old dump must be cleaned out and that the material cannot be dumped a few hundred yards north of the present site. We are firm that no new dump must be located in the Port Granby area. We insist that no nuclear refinery shall be built in Port Granby.

We question whether Eldorado's new refinery is really needed. There are many reasons to think not.

> "In the last four years reactor orders in the United States - the major world market for uranium - have declined from 36 in 1973 to 27 in 1974, 4 in 1975 and 3 last year (1976). A senior energy official of the Carter administration is quoted in the Leader-Post (Regina

Aug. 31, 1977) as saying the U.S. utilities would order no more than five new nuclear reactors for domestic use in the next five years. This compares with earlier estimates of about 30 each year.

Besides the United States, the other countries with major plans to use nuclear energy were the Soviet Union, Britain, France, West Germany, Spain, Italy, Japan and Canada.

The Soviet Union's Five Year Plan called for nuclear energy to supply 8% of total electrical output by 1975, however, the contribution of increased nuclear development did not top 2%.

In Britain there have been no orders for new reactors since 1971. The two publicly-owned power utilities already have 40% more electrical generating capacity than they need.

France's nuclear program has been reduced twice, there are doubts that even the newest low estimate will be met.

A West German court recently ruled against a highly controversial proposal to construct a nuclear reactor at Wyhl on the basis that "a nationwide catastrophe" could

result from an explosion in the reactor's vessel - an accident the court judged to be a distinct possibility.

Spain planned to have twelve nuclear power plants by 1980, but has yet to sign the contracts with Westinghouse.

Italy's target was twenty nuclear power plants by 1985, but only twelve are even under discussion in the Italian parliament.

In Japan the nuclear program has already been cut back by 50% and there are growing doubts that even this lower figure is a realistic target.

In Sweden, nuclear energy was a major issue in the most recent general election - the party that opposed further nuclear development is now the leading party in the new government. A commission whose mandate includes looking into the possibility of phasing out Sweden's existing nuclear reactors has recently been appointed.

Here in Canada, at least a quarter of the number of planned reactors were to be built in the Province of Quebec. But, according to an article in Macleans (June 27, 1977) Quebec will soon announce its

intention to defer construction of nuclear reactors indefinitely."

The question this panel will have to decide appears to be: Is this new refinery really needed in light of the global downward trends in nuclear energy requirements? Is there perhaps some other reason for Eldorado's wish to locate in Port Granby not related to actual need?

As the population of Canada grows, as it most certainly does, the need for farm produce and food production would seem to become ever more important. The Port Granby area is within seventy miles of the Toronto-Hamilton "Golden Horse Shoe" and is uniquely suitable for the production of dairy, beef, fruit and vegetables. This therefore raises the question; can we afford to take 657 acres out of production so that we can produce an export material of questionable value and leave us with a waste product which will require watching for over 4000 years?

Panel, you will have to make the decision; what do we need most, food or waste?

Is Port Granby the most suitable area to build a refinery or is there perhaps a more suitable area away from the populated areas of Southern Ontario?

1. Saskatoon Environmental Society. Should Uranium Stay in the Ground? 1977.

Have all of the questions of health and safety been adequately assessed?

Has there been any evidence of need for the national interest or are we just complying with an Eldorado quest for an easy answer of convenience to deal with the Port Hope, Welcome and Port Granby fiasco's of the past? Is this the way a Crown corporation should deal with its public responsibilities?

The final responsibility for the health, safety wellbeing and future for hundreds of generations lies in your hands.

We trust that you will reach a final decision we can live with and which will allow us to live in security, peace and physical and emotional wellbeing.

Thank you.

THE CHAIRMAN: Thank you Mr. Veldhuis.

We had agreed with an earlier speaker that Eldorado would provide additional data on the market aspects of the plan and perhaps we could defer a detailed discussion of that until they are able to do that.

Are there any questions from the panel?

MR. LANG: This has to do with something you said in the beginning, not the brief

you gave us. It refers to the aesthetic beauty and value of the Port Granby hamlet. I guess I would like to ask Eldorado's people. I don't remember seeing anything in the environmental impact statement that had to do with doing a visual kind of assessement and examining the impact the refinery would have on the scenic values of the area. Is it something you have done some work on?

MR. GRANT: I think you should understand, if you visited the site, the physical distance of the refinery from the village of Port Granby is so great that there cannot be conceivably any visual impact on Port Granby.

MR. LANG: I realize it is in the eyes of the beholder, but sitting on top of a hill, the way it is, the building is going to be quite an intrusion on the landscape, and since there is a lot of work that has been done in the area of visual effects, I am simply asking if you have done any work in that regard.

MR. GRANT: Perhaps Mr. Colborne can provide some answer to that.

MR. COLBORNE: To answer your question, we have hired a firm of Architects. Some of the guildelines given to them have been to make it as aesthetically attractive as possible and to blend into the landscape. So these concerns of yours are

being addressed.

MR. LANG: As a matter of design of the plant, but not as a matter of what impact it would have on the landscape itself?

MR. COLBORNE: Both.

MS. DEROW: When will you be able to consider these issues? I think they are very important

MR. GRANT: What issues are these?

MS. DEROW: Aesthetics and design.

MR. GRANT: I dont' think the Architects have finalized the design yet, since we have not finalized the detailed planning of the refinery. I think what Professor Lang is concerned about is not so much -- if I understand him -- is not so much the physical treatment of the detailed architecture on the structure, but as to what impact it will have as to the magnitude of the structure itself as an introduction into the visual environment. Is that correct, Professor Lang?

MR. LANG: Yes. There are two questions here. One has to do with designing a building properly and as unobtrusively as you can, and one would hope that Architects would always design buildings as attractively as they could, and that would

be a matter for later on. But in the earlier part of an environmental assessment, often work is done to determine what kind of value the landscape seems to have, and that can be done in an objective way and include the subjective aspects as relates to the way the people in the area perceive it. Then, in general, the kind of building that you know you are going to put up, and how will this be seen by people in the area and objectively, how can it be fitted into the landscape. Those questions didn't seem to be addressed, and I don't know if they were within the guidelines, as I recall. But I wondered if you had done any work, and it seems to me that your answer is no in that regard, but yet you intend to do some work in terms of the design.

MR. GRANT: I can tell you one thing, it will be less unattractive than St. Marys Cement because it is a much smaller structure -- it is a shorter structure. Unfortunately we do not have the model here which shows the scale of the buildings themselves in relation to the overall area of the landscape. We are not really talking of anything of that magnitude, so I am a little puzzled as to why you were even considering it as a matter of concern.

MR. LANG: Because my value of aesthetics are different from yours then, I guess.

MR. GRANT: I don't think it is a question of aesthetics. That is where the

Architect gets involved.

MS. DEROW: I would like to ask some clarification. You brought up a very important aspect which has not been dealt with to any great extent as yet, and that is the way of life -- the choice of certain people to live in certain areas because of certain sorts of amenities, beauty, etcetera. Could you talk in a little bit more detail about this way of life and what it means to you?

MR. VELDHUIS: Yes. I think I can perhaps best illustrate it by an example. Shortly after Eldorado had acquired the farms, there was still one herd of cattle on one of the farms. After one particularly windy day, some thirty or more -- I forgot the exact number -- but a considerable number of cattle broke out of the farm and were running through the village. They were heading for another farmer who had just planted a large field of onions and tomatoes and so on. Everybody that I can remember, except perhaps one or two people that for various reasons could not participate, were involved in the roundup. The whole village got together -- or the hamlet, rather. We invited Eldorado to participate in the fun, but they declined. Eventually the cows were rounded up and returned to the farm. This is what I mean. There is a feeling there. There is a fellowship -- a community bond of people that I think to me, coming a

long time ago from the city, is extremely important.

THE CHAIRMAN: Any other questions from the floor?

HOWARD HUBBARD: I live in the hamlet of Port Granby. I would like to ask Mr. Veldhuis if he has any comment on the request by Eldorado to lower the buffer zone or exclusion zone from a 1000 meters to 800 meters.

MR. VELDHUIS: Yes. My comment would be one of a negative nature. I am not for that sort of thing. I would like more safety, rather than less. I am of course also opposed to the whole idea of a buffer zone. That sounds contradictory, but it also excludes the public from monitoring what is going on, and, heavens knows, we do need that monitoring if the past is any indication.

THE CHAIRMAN: Perhaps we are getting back to the same subject of what the buffer zone means, which we are going to discuss later. Perhaps another member of the panel can enlighten me, but the fact that if you lower the buffer zone to 800 meters, you are really saying you will meet those standards that the regulatory agencies want you to have at the factory fence at 800 meters, rather than at 1000 meters.

MR. GRANT: That is correct. In fact, our proposal is not a thousand meters. Our proposal is something in the order of 800. I don't know where the 1,000 has come into these proceedings, except through Mr. Laird's presentation in his diagram. We are not proposing a 1,000 meter zone.

MR. CHENG: You mentioned something about local people not being very happy with the Company and the way it is doing things. I just wondered if this feeling is restricted to Port Granby, or a little more widely spread?

MR. VELDHUIS: Mr. Cheng, I am presenting a personal brief, and my wife and I are very unhappy, and I am sure some of my neighbours are unhappy. I cannot speak for all of the people at this particular time. That is beyond the bounds of my brief at this time.

MS. DEROW: I am very concerned with community impact and differential impact. It seems different communities will be affected. Because you are familiar with the various local communities in this area, could you speak on the other communities, rather than just your own.

MR. VELDHUIS: Yes. I can speculate on that. The immediate next community would Newtonville. It is a community of approximately 110

homes, 450 residents. The impact on that would be quite substantial. There was a series of meetings held by the Town Council a couple of years ago called a Hamlet Study. Newtonville had participated in that particular study and the feeling at that particular time from the residents of Newtonville was loud and clear. They wanted infilling only. They didn't want any major developments. I have subsequently asked the Mayor if that was correct, at a meeting, and he stated that my impression was exactly right, that was what the residents of Newtonville wanted.

I cannot speak with a great deal of comfort about Newcastle or Bowmanville because I am not that familiar with those areas, but I would tend to think that there are at least a substantial number of citizens who prefer to keep things as they are with natural limited growth taking place, rather than a boom and bust effect, where people move in in large quantities and disappear a couple of years later. This is one of the fears I have with respect to the effect of this kind of refinery. If we add that to the Darlington proposal, I think you can see it becomes a mushroom. What I am saying, then, in essence, is that the Port Granby plan cannot be taken into isolation but it must be seen in conjunction with these other proposals.

JOHN GIMBLETT: I am a resident of Port Hope. Eldorado was good enough, for those of us who did not have the time or expertise to study the impact ourselves, to provide us with sort of a resume or overlay. In page 3 of the overlay there is a heading "Exclusion Zone". I am sure the panel is aware of it, but it goes on to say that the site is not rigidly specified, but for planning purposes it was the practice to consider areas from a 1,000 meter radius. Then it goes on to say, perhaps inappropriately called exclusion zone, is to place the surrounding lands under the management of the operating company. Possibly 800 meters should have been put in there by Eldorado, rather than 1,000. I think that is probably where the confusion lies.

MISS LAWSON: Could I just say a word or two about the effect on communities since I have lived in Port Hope for all of my life.

The situation in Port Hope is fairly complicated. Since we first learned about the problems of radiation, about two years ago, there have been a group of citizens who have been very concerned and tried to learn more about this very complicated subject. However, Eldorado is the oldest industry in the town. It employs over 300 workers. I would guess that at least a third of the town are directly or

indirectly dependent on Eldorado. To pursue information about radiation is, in the eyes of many, simply to reinforce the bad image by what a lot of people feel is a hysterical media. I refer now to what occurred over the past couple of years in Port Hope.

Furthermore, Eldorado have already had at least one of their men, either from Management or working level, on the Town Council, often two. They have recently given to the town's new proposed recreational complex a large -- quite a large acreage of land which is contaminated. They have put up at Greenwood Tower Motel the people who have had to leave their homes, so people have been eating shrimp for lunch at the Greenwood Tower Motel -- whole families. Whole families have been put out of their homes two or three times. It is a huge problem. Those of you who know, Ipson's play, The Enemy of the People, will see modern day comparison in the Port Hope situation.

THE CHAIRMAN: Thank you Mrs. Lawson.

MR. LANG: I would like to ask Mr. Veldhuis a question. I have tried to pin down Mr. Grant on a capsule summary of this project, and I would like to ask you something similar to that. You ranged fairly widely over a number of concerns and I wonder if you could give me in the long and the short of it what

your basic concern is about the possibility of a refinery located in your back yard.

MR. VELDHUIS: That is an almost impossible task because there are so many concerns. I have tried to in my few remarks. If you notice it says part one because I had a three part brief at first, but I realized that there would not be enough time allotted to me to present all of my concerns. Some of the concerns I have mentioned there are very much on the uppermost part of my mind. First of all, as I said, I moved in to Port Granby because I liked the style of living. It is a rural, quiet area, right on the edge of Lake Ontario. Its waves lull me to sleep during the summer, and in the winter it is picturesque because of the ice that piles up. I want to stay there and I want it to be as much like that as possible. I don't mind the odd house going up. That is normal. That is progress. That is to be expected. But I would be concerned if a thousand homes went up tomorrow. I would be very concerned. I am even more concerned about Eldorado trying to put up an $80 million dollar construction project in the form of a refinery because that would severely disrupt the area.

MR. LANG: You are expecting as a result of the refinery that there would be a substantial number of new homes built in your immediate area?

MR. VELDHUIS: I would say that there would be sort of an echo effect. After the refinery was built there would probably be other kindred service industries that would come in. Farmers would be put in the position where they would have to make a choice, to pursue their life styles of simply farming and losing money every year, or selling the farm and finding some other enterprise to put their money in. I think it would be unreasonable to think that farmers would stay as farmers forever when there is profit to be made. That would open the door to developers and the next industrial park would be right upon the heels of these developers.

MR. LANG: If I recall correctly, the plan for that area shows it continuing in agriculture. You are assuming, I guess, that the plan would not stand up against developing pressures and it would eventually be changed through the whole process of approval through the provincial government and so on.

MR. VELDHUIS: That is correct.

MR. BIRD: I wonder if I could pursue that one step further. We have heard reference during these hearings to the construction of the Wesleyville Power Station and the government. Supposing that for one reason or another the Eldorado project does not proceed and the other two seem to be destined to proceed.

They are pretty close, as well. They are not on your immediate door step in quite the same way, but would it not be fair to say that some of the concerns that you have raised with respect to Eldorado would apply equally to these other developments, or regardless of Eldorado, virtually the same problem is going to exist.

MR. VELDHUIS: Yes, that is true, with modifications. Yes, it is true. We are dealing at this moment with this particular proposal. We will address ourselves in the future to other proposals when the opportunity presents itself. As I stated in my remarks, this is a mushrooming effect. One is multiplied by the other.

MR. LANG: I think what Peter is getting at is we are not comparing the environment of today with the same environment of tomorrow that might be without any change, but we are comparing the environment of today with an environment of tomorrow that is most likely to occur, and I think he is implying that with Wesleyville proceeding, the environment of tomorrow may not be the sleepy hamlet of Port Granby, but contain some of the other elements that you do fear, so some of those elements might occur in any event.

MR. VELDHUIS: There is this fear in the background already. What we are saying is enough is enough. Let's stop it here, if we can.

MR. BIRD: Let's just carry the scenario a little further and assume, again, that Eldorado does not proceed and it has no interests in those properties. Is it not possible that rather than having one plant sitting inside of 660 acres, or whatever it is, you might end up with worse because you have many small industries coming in and causing more problems.

MR. VELDHUIS: The area is at the moment labelled industrial and it would have to go through public hearings, etcetera, to be changed for any other industry, so we would have our input and the community would be able to make its views known at that time. This is the only hearing that we have to make that designation.

MR. BIRD: I thought this special study area number 12 is basically the same area that we are talking about.

MR. VELDHUIS: Rural area in the special area 12. It is still rural area. "Special studies" only means special studies will have to be made in addition to the rural changes. That is my understanding.

THE CHAIRMAN: I think there may have been an inadvertent error. You said zoned industrial.

MR. VELDHUIS: Yes, of course. It is agricultural. There is a special study status placed over top of that. In other words, to remove that special status, that would have to go through certain procedures before we could change from agriculture to whatever other designation we wish.

THE CHAIRMAN: There is one point I would like to make, Mr. Veldhuis. You mentioned you had other briefs. I mentioned earlier that we are receiving information and concerns by mail, also. If you wish to submit them by mail, we would be happy to receive those also.

I think perhaps we should move on to our last speaker.

MR. GRANT: I had a couple of questions for Mr. Veldhuis. First of all, I thought you intimated that you felt in some way that you could speak on behalf of the Town of Newcastle. I would like to remind you that we have a representative from the Town of Newcastle who I assume will be able to provide that bodies views.

Secondly, concerning Eldorado's previous and mass undertakings, and you particularly refer to certain matters that transpired in 1954. Were you in this area in 1954?

MR. VELDHUIS: No.

MR. GRANT: When didyou move here?

MR. VELDHUIS: I was not in this area in 54, but I do have an intellect and listen to others. My neighbours tell me things.

MR. GRANT: That is what you have been told. You have no direct knowledge of that?

MR. VELDHUIS: I can get it if you wish. May I ask Mr. Ernie Webster to come up here and answer that question. He was there.

THE CHAIRMAN: Mr. Webster might come up some other time, if he considers there is a point he wants to make on that subject.

Perhaps we could push on to any further remarks you may have, Mr. Grant.

MR. GRANT: How far away is your residence from the proposed location of the refinery building?

MR. VELDHUIS: I do not know in exact feet, meters, yards or whatever, but there are two homes between my property and your boundry line, sir.

MR. GRANT: I am talking about the actual refinery building itself. I assume you are not going to be disturbed by the exclusionary zone.

MR. VELDHUIS: I would have to accept that, and this may be in error because I have obviously not measured it, but I would think I am somewhere in the area of eleven or twelve hundred meters from the proposed area.

MR. HARRY POCH: This is a comment, Mr. Chairman. I am representing the town of Newcastle tonight. As stated last night by the Solicitor for the town, the town will be presenting a brief late next week at these hearings. We have taken no official position at this point. We would like input from any source in the community and tentatively propose a public hearing of citizens and for citizens in the town. Further details of this, if this is feasible, will be discussed at these hearings and in the press.

MR. BILL PANTA: I have no brief or statement made up by someone else or myself, but I would like to make a few comments to this meeting, and I thank you, Mr. Chairman, for giving me this opportunity to make this brief statement as a resident in this area. It is a quarter to eleven, and I will take the time into consideration as I think the audience and the panel may already be very tired. For that simple reason my brief will be very short.

I came here to make a few statements approximately two weeks ago I had put into

my possession three black books. To my knowledge it was prepared by a Company for Eldorado at a price of one million dollars. I was shocked when this was brought to my attention. I have looked at it here and there in the short time that was made available to me up to tonight. For that simple reason, I do not have any comment on that book. I cannot dispute any of the statements contained therein. First of all, I do not have a technical background that would enable me to disprove or prove any of the information contained in it. I am not an engineer, but I am a resident of this area.

There is one thing that disturbs me very greatly and that is when a crown corporation spends one million dollars to produce a study in this area. It is a government agency. We, as local citizens do not have the financial power to gain the knowledge to prove or disprove this nuclear refinery.

The second statement I would like to make is with reference to when I moved here ten years ago the only reason I did move here is because I liked the area of the hamlet of Port Granby. I have about twelve to fourteen hundred feet fronting on the shore of Lake Ontario. In the last ten years I have lost approximately ten to fifteen feet of ground to the lake because of erosion. I do not know much about this pollution business that this hearing is con-

cerning itself with. I cannot refute or prove it because I do not know enough about it. I am a simple man who lives here, but I am scared to death about what is going on in this area with regard to atomic pollution. This scares me. As far as I can see, no one was able to prove that this kind of business is good for a human being. But so far as I understand, it is very dangerous to myself, to my family and to my neighbour. I don't know how many people are here tonight but I would like to ask the nine panelists, who I believe are responsible people, to make the decision on my behalf and on behalf of my children. I would also say on behalf of your children. Lake Ontario flows from here to Toronto and on to the United States. You, your children, and future generations are going to drink from that water for many years to come, and I am not sure that it is safe enough. I have not heard anyone in the fields of science and technology prove that this project is safe. I am afraid. I do not know. Do you? Do you have the answer? I am the Father of three children. If my children try to do anything which common sense determines is not safe, I will prohibit them. Am I able to protect my children and the future generations from this nuclear refinery, factory, or you name it?

I have been watching the behaviour of this crown corporation Eldorado. It seems that the crown corporation is entirely different than a private company in this country of Canada. It seems to me that

crown corporations have many more privileges than other corporations or citizens in this country. It seems to me that the government is not representing the public. The crown corporation has many more advantages because of its power and money. I cannot study this book. It would take a University student at least one year to go through it properly in order to know what is contained in it. It is impossible for me or any other ordinary citizen to study this book in that short time. I think it came out on July 15th. It was only available in this area about a week after. I am speaking of Port Granby, Newcastle and so forth.

Furthermore, the agency that is supposed to be covering and regulating Eldorado is called the Atomic Energy Board. Its function is to protect the public in this area. As a citizen in this area, I feel the Atomic Energy Control Board did not protect the public here. I feel that Eldorado Limited, the Atomic Energy Control Board and the federal agency, and I am including Mr. Gillespie, is working together. Why? The only reason I can see in playing this very dangerous atomic game is to make a few million dollars profit at the risk of myself, my children and my neighbours. I have been listening to the press and the radio and I do not think we should allow this kind of problem to occur in this society.

I am not very concerned about

the scientific data that Eldorado produced to the public. I don't know anything about that. My only concern is that we are playing a very dangerous game, and I think for that simple reason we should not allow this to happen. For that simple reason, ladies and gentlemen, I would like to ask you to be the judge of this kind of very dangerous concept and I tell myself that you are not only thinking about the profits of the company and the federal government, but you will take into consideration the lives of myself and my children. Thank you very much.

THE CHAIRMAN: Thank you Mr. Panta. You have touched on a number of areas of concern. It would be difficult now to go into them, but I would certainly urge that you be able to attend our second phase of our hearings when we hope to have people here who can explain their opinions and ideas as scientific people and make them understandable. Although these reports are written in technical terms, the panel has some difficulty with many parts of it, and if the technical experts cannot make it plain to people who do not have a technical background, they will probably have a lot of questions from us to make it plain. I hope you can attend the second phase of our hearings when these issues will be discussed at that time.

Are there any questions?

MR. CHENG: I have a short question. Erosion is one of the factors of concern in the report. You mentioned some erosion rates as perceived on your property. Can you repeat that again?

MR. PANTA: My property is immediately over Lake Ontario. I have a seventy foot bank above the Lake Ontario water level. The erosion is so great that about a year ago it reached my south fence, which is in excellent shape right now, and the field just washed away, or erosion of the ground, which is losing the ground. There is a lot of water in all of the ground in that area. The water table is very high. As an example for the panel, ten years ago I had to dig a well when I bought the farm. The well digging company dug about ten feet down and struck water. They dug down and down with the auger. I have been measuring my well every summer. In August this year it was very dry. My water level did not drop more than three feet in the last ten years. As a layman, this proves to me that the water table is very high there and anything that goes into the ground certainly goes into Lake Ontario and it washes away anything you can think of. That, to me, is very dangerous.

MR. CHENG: Excuse me, but I was referring to the fact that when you moved to your property ten years ago you had a certain stretch of

property to the lake, and since then it has eroded to a certain extent. How much has been eroded?

MR. PANTA: I would say from ten years to this time that I have lost ten to fifteen feet of solid ground. Erosion has different effects in different parts. In some places the erosion has been up to my fence. In another year, I think the whole fence will be washed into Lake Ontario.

MR. GRANT: Do you raise corn on your property?

MR. PANTA: Yes, sir, I have corn on the south side of Lakeshore Road, and I have corn north of the Lakeshore, right almost to Baseline, especially the pasture at the north of the property.

MR. GRANT: Do you use nitrate fertilizer with the corn?

MR. PANTA: I am not an expert on that. The ground has been taken care of by the experts and they do whatever is necessary for the farming of it.

MR. GRANT: You do not farm it yourself?

MR. PANTA: I own the farm, but I am not farming it myself.

MR. GRANT: Do you know whether nitrate is used on your farm?

MR. PANTA: I could not tell you sir.

MR. GRANT: Would you be frightened if it were used?

MR. PANTA: If somebody was using any material that would be a health hazard to me or to the public, I certainly would.

THE CHAIRMAN: Mr. Grant, I have difficulty in seeing how that last question was a point on clarification.

MR. GRANT: Well, he has expressed concern --

THE CHAIRMAN: I realize he has expressed concern. It was about the proposed refinery, and not nitrates.

MR. GRANT: His concern, Mr. Chairman, was that dangerous materials were going into Lake Ontario. His concern was that that these materials which were coming largely from our property were going to be harmful to your children, my children and his children. I think this gentleman might be surprised to know that there are other means and other chemicals going in to the property in a natural manner, so perhaps his concern and scare might be put in proper perspective.

THE CHAIRMAN: I think per-

haps that is where we might have the second phase of the hearings and discuss these factors when the technical people are here to discuss it.

MR. LANG: I wonder if you are suggesting that, for example, a way of alleviating the concern about radioactivity would be to increase the amount of other kinds of hazardous materials.

MR. GRANT: Surely you are not suggesting that I am suggesting that.

MR. LANG: I hope you are not suggesting that all these various kinds of concerns are all the same.

MR. GRANT: No, but the scare here is that my client is depositing into Lake Ontario quantities of contaminants which are likely to be harmful, as this gentleman has said, to your children, my children and his children. I do not believe that to be a fact. I do not believe it to be as harmful as the normal operation which goes on day by day in a farming community and on this gentleman's property, which has the effect of depositing nitrates into the lake.

What I am asking and suggesting is that the scare be alleviated and be put into its proper perspective. Sure, we would all like to have the water absolutely crystal clear. Nobody denies that.

MR. PANTA: Mr. Chairman, if I may make one comment to Mr. Grant's previous question, I do know that the Province of Ontario's Environment Department has been stopping many chemicals in the use of spraying, and furthermore, I know that even the pest control people do not have the same chemicals they used previously because the Department of the Environment found out that they were dangerous to the public. That is what I meant previously in my comments.

THE CHAIRMAN: I think we should leave the discussion of the merits of nitrates and merits of residual disposal to the second phase.

Mr. Veldhuis, did you have a question?

MR. VELDHUIS: I will go by your ruling Mr. Chairman. I will leave my question to the second phase. It had to do with the same thing.

THE CHAIRMAN: Thank you. Are there any other questions of clarification?

It has been customary for me at the conclusion of hearings to ask if anyone wishes to present a short brief; however, because of the fact that it is after 11:00, unless there is somebody who cannot make another hearing, I would declare the meeting adjourned till 1:30 tomorrow.

Thank you.

--- The Committee adjourned until 1:30p.m. September 29th

vestigation shall be undertaken by the Region in conjunction with the council of the respective area municipality, the Ministry of the Environment and any other authority having jurisdiction."

So the proposal which is industrial refinery does not conform to this policy at this point because the proper lineage destination has to be determined in the plan. That is how that should be interpreted.

MR. BIRD: It certainly does not convey that meaning to me. I am glad to have it explained. I can only say that I am not sure whether Eldorado has yet had a chance to decide on how it wishes to respond to the brief, presumably something along the lines of what we were talking about with respect to the Health and Welfare brief; maybe what you propose to do is you go through the document and submit your responses to the various questions -- because there do seem to me to be quite a large number of very appropriate questions being asked. I do not want to simply pick some of them off that Mrs. Thorpe has not referred to if it is in fact your intention to follow that general approach. Perhaps I could put that question to Eldorado at this stage to know whether we want to go into anymore details.

MR. GRANT: Yes. If you look

at page 3 of the submission, you will see in the last paragraph on that page a suggestion put forward by the ministry that Eldorado respond to their criticisms prior to subsequent hearings before the panel. Where there is a little problem is that they then go on to say: "This additional information together with the present documentation will enable the Province to evaluate the merits of the proposal."

My problem is to know whether the ministry would expect to have our responses to this fairly extensive list of questions -- certainly they cannot have them this evening -- before we reconvene on the so-called stage two, or would they like to have them next week. Next week would be very difficult for us to do, but I suggest we endeavour to respond to as many of these questions as we can in writing prior to the commencement of the stage two hearings. I have no objection to our responses being disseminated to the public. That would provide the ministry with an opportunity of considering our responses so that when we get back to stage two, the intensive consideration of their questions, we will all have an opportunity of weighing the various sides. It would also give us an opportunity to call upon the ministry's suggestion that there might be some further communication between Eldorado experts and their experts to clarify areas where there may be misunderstanding and there may be no need to burden the panel with things that are agreed

but just not clearly understood. We have to follow your suggestion. We are trying to inform you.

THE CHAIRMAN: If you follow the suggestion of further meetings, if I am correct, from the ministry or the representatives of the Ontario government, they want some length of time after you have answered these questions to decide what their position is going to be in the phase two hearings. Is that correct?

MR. BROWN: That is fair, yes.

THE CHAIRMAN: You have indicated a mutual interest in getting together in sorting out this paper vis-a-vis the concerns expressed in it. It would obviously be helpful to the panel if we were advised of the results of this and which statements in here are changed or found not necessary due to misunderstandings and so on and what your responses are to specific statements that still remain in here. How fast we can do that is another question.

MR. BROWN: I think what we are saying, so far as for the benefit of Eldorado, that our people are available and if problems arise in understanding the questions or the nature or intent of the question, then we would be glad to confer with them and assist them in whatever way possible. The initiation may have to come from Eldorado, as a result of the fact that we do not know what problems they may have in answering the questions. But we would, as I

am sure the panel would, like to have the answers as soon as possible, having the understanding that there are going to be a lot of questions that Eldorado have the responsibility to fulfill for next Tuesday, so we do not have any objections to waiting until phase two. Hopefully we will have an opportunity in the intervening time to consider the matters being raised and deal with them through the Company or create some new information from their answers so we can approach the panel with a better position in phase two.

MR. BIRD: Perhaps as a suggestion that might help to bridge the gap here, would it be possible for you and Eldorado to go through the document and segregate the kinds of questions into a number of categories. It seems to me that some are matters of clarification which is, of course, the major emphasis of this particular phase of our hearing -- such things as descriptions of the waiting procedures and the methodology and things of that kind. Ontario has found some difficulty, and I found some difficulty myself, in understanding the rationale as to why certain weights were assigned to certain criterion, for example. That kind of question I would think should be possible to get a fairly quick response to because clearly a lot of thought and time has gone into the study and it is just simply a matter of putting it out more clearly for us so that we lesser beings can understand how it is you

have arrived at your decisions.

There are other things in here considered to be errors. It may be that in fact a very quick review can either confirm there was a calculation error, or whatever, or it may turn out that your analyses show that in fact it is a deeper problem than that and it does need to have further discussion. Clearly, that would be something that you would not be expected to respond to as quickly. You can have your consultations with the experts and let us know, as the Chairman has said, the results of the discussions.

There may be certain other things which are considered simply recognized as gaps and the important thing there is that it is legitimate on the part of what we are here to do to expect you to fill that gap, or is it something which in fact you are not going to fill to meet our needs, you may have to fill anyway, to meet the Province of Ontario's needs. It seems to me that it may be possible to examine this document in such a way that you could categorize the kinds of questions and at least give us some feed-back sometime before the end of this particular series of hearings of this week and next week, just as you said you are able to do for Health and Welfare.

I put this as a proposal, if it makes sense to you.

MR. GRANT: First of all, we

have already seen the written submission of the federal ministry of the environment and there are a number of questions in the provincial environmental examination of it which are overlapping with the federal environmental overlap, and we would hope that we would be able to deal with them in the same way. The federal department is not going to make their submissions now, I understand, until next week.

On the other hand, since the submission -- the very competent submission on the part of the Ontario ministry -- has been disseminated to the public, what I would like to do is to deal with each of their questions and give an answer to that question, even if the answer is simply that it has been dealt with in response to a different question at a different point in time. I do not know, and I admit that our concern is to satisfy the panel, but we are concerned with the public's concern, and what we would like to do is deal question by question with the questions raised in the brief submitted by the ministry of environment, Ontario, but then somehow manage to blend them also with the response that we have to make to the questions which had been raised by the ministry of the environment, federal.

MR. BROWN: Maybe it is something we can work out.

THE CHAIRMAN: Yes, we have flogged

this horse to death. Eldorado is going to answer the questions as fast as they can, and you are going to receive the answers and we are, also.

MS. DEROW: I have about four issues I would like some clarification on. First of all, the monitoring; you put together this list of different aspects of the environment which are being monitored.

MRS. THORPE: May I clarify that this is a list the panel has and I referred to earlier as an information package. For those people who do not have it, we will provide it, if you wish.

MS. DEROW: The data collected and made public -- it becomes public information, all of this data?

MRS. THORPE: All of the data are public information.

MS. DEROW: What I would like to know is that since this data are made public, but nobody has critical cut-off points,which they say there is a problem, what is done with the data? You just publish it?

MRS. THORPE: I think there is obviously more done with the data than that. Perhaps I could address this question to the district officer responsible for it, Mr. Peter Hughes.

MR. HUGHES: You asked what is done with the data. The data are collected, as in-

dicated there, on a regular basis. If there are any data where ministry objectives or standards are exceeded, then this is discussed with the company and measures are taken to adjust that.

MS. DEROW: This is in view of provincial regulations.

MR. HUGHES: That is provincial regulations, yes.

MS. DEROW: In terms of monitoring, are there plans to increase the scope of monitoring systems that provincial ministries are now using?

MR. HUGHES: I think the degree of monitoring for any new refinery would be approximately the same as is done at the existing refinery. There would be some additions, yes.

MS. DEROW: But there are no long term overall comprehensive plans for increasing the level of environmental monitoring in Ontario?

MR. HUGHES: In Ontario?

MS. DEROW: Yes.

MR. HUGHES: Subject to any need being shown, it will be done.

MS. DEROW: "Subject to any need being shown," for example, noise levels.

MR. HUGHES: Yes.

MS. DEROW: Is this being done?

MR. HUGHES: Specifically where?

I find that a little difficult to answer.

MS. DEROW: I was just wondering how one can establish a need for noise monitoring to be carried out.

MR. HUGHES: It could become apparent in many ways; for instance, if there were complaints from members of the public, this would indicate there is a need for that, or in our normal routine monitoring around the district, if we became aware, that is the ministry, that there was excessive noise, we would be aware of it in that way, too. We have our noise pollution control group that we would call into action under these circumstances to assist us.

MS. DEROW: I wonder how one would establish this process of noise monitoring to be more comprehensive. In your introduction I would like to clarify, both for the panel and public, a lot of us do not understand the complete process involved in federal-provincial co-operation. One is this Canada-Ontario accord. Could you discuss it briefly, and could we have a copy of it, if we do not have it, for public information?

MRS. THORPE: Rather than try to discuss it briefly, other than it was signed in 1975 between the then minister of the federal department of the environment, Jean Sauve, and the present minister of the environment in Ontario, Mr. Kerr, I can make copies

of it available. It is a document setting out areas of co-operation between the federal and provincial ministries of environment, so I will bring copies of that. Perhaps that would answer the question.

MS. DEROW: Are there any plans to increase the comprehensiveness of this co-operation?

MRS. THORPE: That is a question I cannot answer, but I will try to get an answer for you.

MS. DEROW: The next question of clarification also occurs in the introduction. It has to do with the Environmental Assessment Act of 1975, where you say that the provincial ministires are attempting to make certain the intent of this Act being addressed in our deliberations. Could you clarify briefly the intent of this Act?

MRS. THORPE: When I was first appointed to the steering committee to the panel on the Eldorado project, it was apparent from the outset that the panel at that time was concerned with what we would call a narrow definition of the environment under the provincial statute. In the Environmental Assessment Act, 1975, there is a definition of the environment which I will briefly summarize.

"(c) "Environment" means,

(i) air, land or water,

(ii) plant and animal life, including man,

(iii) the social, economic and cultural con-

ditions that influence the life of man or a community,

(iv) any building, structure, machine or other device or thing made by man,

(v) any solid, liquid, gas, motor, heat, sound, vibration or radiation resulting directly or indirectly from the activities of man, or

(vi) any part or combination of the foregoing and the inter-relationships between any two or more of them,

in or of Ontario;

So what we have attempted to do is try and show in the guidelines issued to Eldorado and in subsequent documentation for consideration that the broad environmental act would be dealt with, so when we are trying to follow the intent of the statute, it was the intent with respect to what would be considered under the environmental assessment. We were not concerned with the administrative procedures or anything like that.

MS. DEROW: Could we elaborate a bit on occupational health at this time? We discussed earlier this afternoon the federal provisions for occupational health. At the provincial level, how is occupational health dealt with, especially in regard to nuclear matters?

MRS. THORPE: I am going to have

Mr. Ben Chan from the ministry of labour, address that. The ministry of labour is responsible for all occupational health matters.

MR. CHAN: The ministry of labour makes inspection of the plant site. We try to enforce Ontario regulations as much as possible. The plant is generally under the auspices of the Atomic Energy Control Board. Eldorado will comply with our regulations on the same basis as they will comply with the zoning law. We have had quite good co-operation from them. There have not been any thorny issues.

MS. DEROW: I understood some of the aspects of occupational health were classified information. Are you allowed access to such information?

MR. CHAN: Will you phrase that question again.

MS. DEROW: I thought I understood this afternoon that we would not learn about occupational health -- it was privileged information in some aspects of it. I wonder if you are given access to all?

THE CHAIRMAN: Does Eldorado agree with that?

MR. GRANT: I don't think I quite said that. What I did say was that the establishment regulations for occupational safety of our

workers is a matter within the control and authority of the Atomic Energy Control Board, and we complied with whatever their requirements were. I did not say it was a matter of secret or anything of that sort. What I did say was that in order to understand the definite risks, you had to understand the process which the Atomic Energy Control Board knows about. We do in fact comply with all the requirements of the Ministry of Labour Ontario. We do in fact, I hope. We did yesterday.

MR. BROWN: I think Mr. Chan's problem is the same as with respect to the zoning; you are talking about a federal regulatory division and a provincial one and it is a matter of division of authority constitutionally, or whatever way you want to look at it.

MS. DEROW: I have on more question. This has to do with land use. On page 7 you discussed and critiqued the choice of alternate sites.

MRS. THORPE: Not necessarily the choice of alternate sites; the evaluation of them.

MS. DEROW: You say that should this location prove unacceptable, perhaps we should review it. On page 36 you will have some discussion of agricultural capabilities for site selection. One of the very difficult things here is that I could not be sure if you really wanted us and you wanted to take into

consideration site selection in the whole evaluation process.

MRS. THORPE: I am not exactly sure of what you are saying. I know the pages to which you are referring.

MS. DEROW: On page 7 you say that should this location be unacceptable, then evaluation of alternate sites should be required. In view of the Environmental Protection Act of 1975, in the total evaluation impact assessment --

MRS. THORPE: You mean the Assessment Act.

MS. DEROW: The Assessment Act. Should the process include in the very consideration of the final site selected -- alternate sites? Do you understand now?

MRS. THORPE: Yes. I think you know the answer to that one, too.

MS. DEROW: Yes.

MRS. THORPE: Our provincial act does set out the requirement in the document of alternatives and alternative methods of carrying out the undertaking. In ordinary terms that most people can understand that better, including myself, that would include things such as alternative sites and alternative parts of the environmental assessment document submitted under the provincial statute.